

**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641**

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2004-115-EA

CASEFILE/PROJECT NUMBER (optional): Grazing permits #051414 and #051402

PROJECT NAME: Cox and Cox Grazing Permit Renewals

LEGAL DESCRIPTION: Location of Proposed Action: Rio Blanco County

Allotment			Legal Description		
No.:	Name:	BLM Acres	TWP	RANGE	Section(s)/Lot(s) \or Portions of
06012	Upper Thirteenmile	715	T 2S	R 94 W	Sec 31
			T 2S	R 95W	Sec 35,36
06013	Fourteenmile	2,493	T 3S	R 94W	Sec 6,7,8,17,18
			T 3S	R 95W	Sec 1,2
06039	Hammond Draw	7,083	T 2N	R 100W	Sec.9,10,15,16,21,22,23,24,25,26,27,28,34,35,36
06041	Lower Fletcher Draw	9,878	T 2N	R 100W	Sec.,8,9,16,17,18,19,20,21,28,29,30,31,32,33
06336	Hatch Flat	1,495	T 2N	R 100W	Sec 4,5
			T 3N	R 100W	Sec 32,33

APPLICANT: Karl and Nancy Cox, #051414; Wade and Shirley Cox, #051402

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: Allotment Categorization- all White River Field Office (WRFO) grazing allotments have been placed in one of three management categories that define the intensity of management: (1) improve, (2) custodial and (3) maintain. These categories broadly define rangeland management objectives in response to an analysis of an allotment's resource characteristics, potential, opportunities, and needs. The intent of allotment categorization is to concentrate funding and on the ground management efforts on those allotments where actions are needed to improve the resources, or resolve serious resource conflicts. The improve category was identified in the White River Record of Decision and Resource Management Plan (ROD/RMP) for development of allotment management plans (AMPs). The AMPs will direct

livestock management through decisions, such as: 1) grazing systems, 2) season of use, 3) number and kind of livestock; and 4) range developments or vegetation treatments

Allotment Categorizations for allotments analyzed in this permit renewal are as follows:

Allotment		
Number	Name	Categorizations
06012	Upper Thirteenmile	Custodial
06013	Fourteenmile	Maintain
06039	Hammond Draw	Improve
06041	Lower Fletcher	Improve
06336	Hatch Flat	Custodial

This permit renewal will focus on the on Hammond Draw (06039) and Lower Fletcher Draw (06041), since both are improve category allotments. The Hatch Flat and Upper Thirteenmile allotments were classified as Custodial because of their relatively small acreages and the limited likelihood of changing the existing rangeland/vegetation. The Fourteenmile allotment was classified in the Maintain category principally based on the riparian condition /potential of Fourteenmile Creek. The principal impact focus of this permit renewal on the Fourteenmile allotment will be to formally change grazing use in the pasture containing the Fourteenmile riparian area (designated as ‘below the drift fence’ in the grazing schedule) to winter use only.

Proposed Action (*Alternative A*): The proposed action would be the renewal of grazing permits # 051402 and #051414 for a ten-year period under an allotment management plan for the combined operations. The objectives of the combined Hammond/Fletcher Allotment Management Plan are:

- To maintain or enhance a healthy rangeland vegetation composition and species diversity, capable of supplying forage at a sustained yield to meet the current forage demands for livestock and wildlife.
- To provide for adequate forage plant growth and/or regrowth opportunity necessary to : 1) replenish plant food reserves ; and 2) produce sufficient seed to meet the reproduction needs necessary to maintain an ecological presence in the plant community.
- To establish a grazing system wherein the permittee can use the allotments in his permit as pastures to graze the range with a strategy that provides for plant growth requirements and provides for the most economical use of all forage resources available to the ranch operation.

The key part of the management plan will be the grazing system with the primary purpose to provide a period of deferment of livestock grazing during the critical growing season (April 20-May 20) for the “I” category allotments involved, Hammond Draw and Lower Fletcher Draw. Implementation of this grazing management plan will insure that we continue to meet or exceed the Standards for Rangeland Health in the future.

The proposed grazing system will provide deferment from grazing during the critical growth period on an alternate yearly basis for the Hammond and Lower Fletcher allotments. Because the boundary between the allotments is not fenced, cattle can drift back and forth across the allotment line. Therefore, the grazing schedule will authorize some use in the critical growth period on both allotments each year, although at a reduced level. Cox Brothers have agreed that they will try to keep the majority of cattle in the allotment scheduled to receive most of the spring use in a given year in order to accomplish the principal objective of providing rest from grazing during the critical growth period. The grazing schedule shows the **combined** operation for Hammond, Lower Fletcher and Fourteenmile, the allotments that they operate in common.

YEAR 1 GRAZING SCHEDULE							
Allotment Number	Allotment Name	Livestock Number	Kind	Date On	Date Off	% BLM	AUMs
06012	Upper Thirteenmile*	60	Cattle	06/01	10/15	36	98
06013	Fourteenmile	38	Cattle	06/01	09/30	69	105
		62	Cattle	10/16	01/05		114
06039	Hammond Draw	65	Cattle	03/01	04/20	100	109
06039	Hammond Draw	125	Cattle	04/21	05/23	100	107
06041	Lower Fletcher	85	Cattle	03/01	04/20	100	142
06041	Lower Fletcher	75	Cattle	04/21	05/23	100	55
06041	Lower Fletcher	108	Cattle	12/01	02/28	100	316
06336	Hatch Flat*	83	Cattle	03/18	04/30	100	119

*Wade and Shirley Cox Operation only

YEAR 2 GRAZING SCHEDULE							
Allotment Number	Allotment Name	Livestock Number	Kind	Date On	Date Off	% BLM	AUMs
06012	Upper Thirteenmile*	60	Cattle	06/01	10/15	36	98
06013	Fourteenmile+	38	Cattle	06/01	09/30	69	105
		62	Cattle	10/16	01/05		114
06039	Hammond Draw	81	Cattle	03/01	04/20	100	136
06039	Hammond Draw	75	Cattle	04/21	05/23	100	80
06041	Lower Fletcher	51	Cattle	03/01	04/20	100	86
06041	Lower Fletcher	125	Cattle	04/21	05/23	100	134
06041	Lower Fletcher	100	Cattle	12/1	02/28	100	294
06336	Hatch Flat*	83	Cattle	03/18	04/30	100	119

* Wade and Shirley Cox Operation only

+ Line one, 38 C 6/1-9/30 Use is **above** the drift fence in Dark Canyon; Lines two & three, use is below the drift fence in Dark Canyon (Fourteenmile riparian area)

To insure proper functioning of the grazing system and maintenance/improvement of rangeland health, included in this grazing plan are the following actions to be implemented over the life of the permit:

Range improvements

Reservoirs- Fifteen reservoirs will be constructed to further improve livestock distribution and retain silt; i.e., these will be dual-purpose range and watershed structures. The proposed reservoir locations have been flagged and are also indicated on the attached map, Figure 1. These will be small structures, less than 1000 cubic yards each. The area of disturbance will be no larger than 75 X 75 feet. All disturbed areas will be promptly revegetated by seeding with native seed mix #3 from the Appendix B-2, White River ROD/RMP.

Seed Mix #	Species (Variety)	Lbs. PLS per Acre	Ecological Sites
3	Western wheatgrass (Rosanna)	2	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)
	Bluebunch wheatgrass (Secar)	2	
	Thickspike wheatgrass (Critana)	2	
	Indian ricegrass (Nezpar)	1	
	Fourwing saltbush (Wytana)	1	
	Utah sweetvetch	1	
	Alternates: Needle and thread, globemallow		

The allotment locations and number of reservoirs proposed are: Hammond Draw- (8), Lower Fletcher Draw-(6), and Hatch Flat- (1) and are listed in the table below.

Project Name	Township	Range	Section	Quarter	Quarter	Type of Project
Hammond Draw #1	T 2 N	R 100 W	16	SE	SW	reservoir
Hammond Draw #2	T 2 N	R 100 W	22	NE	SE	reservoir
Hammond Draw #3	T 2 N	R 100 W	22	NE	SE	reservoir
Hammond Draw #4	T 2 N	R 100 W	22	SW	SE	reservoir
Hammond Draw #5	T 2 N	R 100 W	27	NW	SE	reservoir
Hammond Draw #6	T 2 N	R 100 W	27	SE	SE	reservoir
Hammond Draw #7	T 2 N	R 100 W	22	NE	SW	reservoir
Hammond Draw#8	T 2 N	R 100 W	16	NW	SE	reservoir
Fletcher Gulch #1	T 2 N	R 100 W	17	NE	SW	reservoir
Fletcher Gulch #2	T 2 N	R 100 W	17	NE	SW	reservoir
Fletcher Gulch #3	T 2 N	R 100 W	17	NE	SW	reservoir
Fletcher Gulch #4	T 2 N	R 100 W	17	SW	SW	reservoir
Fletcher Gulch #5	T 2 N	R 100 W	30	NW	SW	reservoir
Fletcher Gulch #6	T 2 N	R 100 W	30	NW	SE	reservoir
Hatch Flat	T 3 N	R 100 W	32	NE	SW	reservoir

Fletcher Corral -Authorization for Cox Brothers to construct a small “trap “and corral to catch and sort livestock including strays, for weaning of calves and gathering of cows. As cows and calves are gathered in the late fall (cows coming back from Spring Creek), the calves will be sorted off at this corral and the cows turned back out on the range. This will eliminate trailing

back and forth to the ranch. This corral will be about 120 ft by 100 ft and will utilize the rimrock on the west side of Fletcher Draw to form its backside. The facility will include a large corral constructed of cedar posts and woven wire with a smaller, crowding corral circumscribed within it constructed of cedar posts and corral poles. The table below shows the location of the corral and is also plotted on the attached map.

Project Name	Township	Range	Section	Quarter	Quarter	Type of Project
Fletcher Corral	T 2 N	R 100 W	17	SW	NE	Corral

Development of Spring(s) - W. Hammond Spring #1 will be developed to further improve livestock distribution. The existing spring rises out of sandstone rock on the northwest side of W. Hammond Draw. The site of the source will be excavated with a backhoe, collected and piped (the pipe will be trenched and buried) to a loader tire or plate steel tank situated about 20-30 feet below the source. All disturbed areas will be recontoured and revegetated with adapted perennial grasses. The spring location has been flagged. W. Hammond Spring #3 is located immediately west of the Hammond/Fletcher divide, approximately 1 mile southwest of Hammond Spring #1. This spring will be developed in the same manner as W. Hammond Spring #1; that is, the source will be excavated, collected and piped to a tank placed up out of the immediate drainage. The spring source will be fenced with buck and pole fencing. No road will be built to the spring. All earthen disturbances associated with access and development of this spring will be recontoured and revegetated with native seed mix #3. Listed in the table below are the locations of the proposed springs, which are also plotted on the attached map, Figure 1.

Project Name	Township	Range	Section	Quarter	Quarter	Type of Project
West Hammond Spring #1	T 2 N	R 100 W	16	SE	NE	spring
West Hammond Spring #3	T 2 N	R 100 W	21	NW	NW	spring

Prescribed burning of approximately 300 acres, basically the lower half of the EW-2 chaining within the Lower Fletcher Draw allotment, T 2N, R100W Sec 17, 18 (see Figure 2). This is a chaining of juniper woodland completed in 1960. At that time, 632 acres in one unit on the west side of Fletcher Draw were chained. There is a lot of downed juniper which impedes movement of large animals because the project was a one-way chaining. There is also fairly heavy regrowth of junipers of 3-10 feet in height. The project file does not indicate a specific purpose for the project, but it was probably forage improvement for livestock and wildlife. This prescribed burn would be a joint range improvement/ hazardous fuels reduction project. The project sites would be monitored on an annual basis for proliferation of noxious weeds.

Eradication of Salt Cedar (Tamarisk) will take place at existing pond sites by hand and mechanical grubbing followed by treatment with imazapyr and treatment of young plants (generally these will be plants 4 foot tall or less) with imazapyr. Legal descriptions for treatment locations are listed in the table below and a map of the areas can be found in Figure 3. The proposed action is foliar application of 1% v/v solution of imazapyr (Arsenal) (1 lb. ai per acre) to individual salt cedar plants using a backpack sprayer or pickup mounted sprayer. A cut stump application of the same solution may be made in lieu of foliar application when the target plants

are close to water. Most salt cedar plants 4 ft or taller will be cut off by hand with an ax or pruning shears ,with a chain saw, or by blading at the soil surface with a bobcat or small caterpillar, (D-3 or equivalent); then the cut stump application of imazapyr will be made. Total area treated would less than 3 acres. No application of Arsenal will be made to any flowing or impounded water source. Salt cedar treatment would be applied from June through August. Duncan and McDaniel (Weed Technology, 1998 Volume 12: 337-344) achieved nearly 100% mortality of salt cedar with an August application.

Treatment Location	Township	Range	Section	Quarter	Quarter
#1	T 2 N	R 100 W	15	SW	NW
#2	T 2 N	R 100 W	21	NW	NW
#3	T 2 N	R 100 W	22	NE	NE
#4	T 2 N	R 100 W	23	NW	NW
#5	T 2 N	R 100 W	27	SE	SW
#6	T 2 N	R 100 W	26	SW	NW
#7	T 2 N	R 101 W	13	SE	NE

Supplemental feeding authorization- The grazing management plan will include an authorization to feed supplemental protein during the winter grazing period (12/1- 2/20) on the Lower Fletcher and Hammond Draw allotments in order to obtain the best possible animal distribution and performance during this period. Only certified noxious weed free or processed feed supplements will be authorized on public lands. Authorization of supplemental feeding is consistent with 43 CFR 4130.3-2(c), (Other terms and conditions).

Continuation of Current Management (Alternative B): This alternative would provide for renewal of the expiring permit with no changes made in livestock kind, numbers, season of use, or type of use (active, suspended, nonuse). Livestock grazing use would continue as permitted based upon the following schedule:

Karl and Nancy Cox, #051414

Current Grazing Permit Schedule							
Allotment Number	Allotment Name	Livestock Number	Kind	Date On	Date Off	% BLM	AUMs
06013	Fourteenmile	38	Cattle	06/01	09/30	69	43
		105	Cattle	10/11	01/30	69	108
06039	Hammond Draw	100	Cattle	04/22	05/23	100	105
06041	Lower Fletcher Draw	65	Cattle	03/22	04/21	100	66
		50	Cattle	04/22	05/23	100	53
		65	Cattle	12/01	02/20	100	175

Wade and Shirley Cox, #051402

Current Grazing Permit Schedule

Allotment Number	Allotment Name	Livestock Number	Kind	Date On	Date Off	% BLM	AUMs
06012	Upper Thirteenmile	115	Cattle	06/01	10/25	27	150
06013	Fourteenmile	38	Cattle	06/01	09/30	69	43
		105	Cattle	10/11	01/30	69	108
06039	Hammond Draw	100	Cattle	04/22	05/23	100	105
06041	Lower Fletcher Draw	65	Cattle	03/22	04/21	100	66
		50	Cattle	04/22	05/23	100	53
		65	Cattle	12/01	02/20	100	175
06336	Hatch Flat	130	Cattle	03/18	05/30	100	188

The following table depicts the acreage and grazing capacities for the allotments included in these grazing permit renewals.

Allotment/Pasture Acreage and Forage Production							
Allotment Number	Allotment Name	BLM Acres	BLM AUMs	Private Acres	Private AUMs	Total Acres	Total AUMs
06012	Upper Thirteenmile	715	98	1193	174	1908	272
06013	Fourteenmile	2,493	219	669	97	3162	316
06039	Hammond Draw	7,098	210	0	0	7,098	210
06041	Lower Fletcher	9,878	588	0	0	9,878	588
06336	Hatch Flat	1495	119	0	0	1,495	119

Alternative C (No Grazing): The no grazing alternative consists of not issuing a grazing permit for livestock use. There would be no livestock grazing on public lands within the five allotments on which it is currently permitted.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: BLM grazing permits #051402 and #051414 which authorize grazing on the Upper Thirteenmile (06012), Fourteenmile (06013), Hatch Flat (06336), Hammond Draw (06039) and Lower Fletcher Draw (06041) allotments expired on February 28, 2004. In the interim period while this analysis is being prepared and reviewed, these permits have been renewed under the FY 2004 Congressional Appropriations rider. These permits are subject to renewal at the discretion of the Secretary of the Interior for a period of up to ten years. The Bureau of Land Management has the authority to renew livestock grazing permits/leases in accordance with the provisions of the Taylor Grazing Act, the Public Rangeland Improvement Act, the Federal Land Policy and Management Act and the White River Resource Area Resource Management Plan/Environmental Impact Statement as amended by the Standards for Public Land Health in Colorado.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-22 through 2-26

Decision Language: With minor exceptions, livestock grazing will be managed as described in the 1981 Rangeland Program Summary (RPS). That document is the Record of Decision for the 1981 White River Grazing Management Final Environmental Impact Statement (Grazing EIS).

Other Plans: With respect to the use of imazapyr (Arsenal) for the eradication of salt cedar as part of this proposed action, the Vegetation Treatment on BLM Lands in 13 Western States EIS and Colorado Record of Decision (1991) is hereby tiered to and incorporated by reference.

COMPLIANCE WITH SECTION 302 OF FLPMA RELATIVE TO THE COMB WASH GRAZING DECISION

A review of applicable planning documents and a thoughtful consideration of the new issues and new demands for the use of the public lands involved with these allotments have been made. This analysis concludes that the current multiple use allocation of resources is appropriate.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. The following table summarizes the assessment of each public land health standard for each allotment. Specific findings for each standard are located in the critical elements section below.

STANDARDS FOR PUBLIC LAND HEALTH			
	Current Situation	With Proposed Action	With No Grazing

Standard	Achieving or Moving Towards Achieving	Not Achieving	Causative Factors	Achieving or Moving Towards Achieving	Not Achieving	Achieving or Moving Towards Achieving	Not Achieving
#1-Upland Soils							
06012	2493 acres	0 acres	N/A	2493 acres	0 acres	2493 acres	0 acres
06013	715 acres	0 acres	N/A	715 acres	0 acres	715 acres	0 acres
06336	982 acres	513 acres	Cheatgrass/Histo rical grazing practices/	982 acres	513 acres	982 acres	513 acres
06039	5266 acres	1817	Cheatgrass/Histo rical Grazing practices	5266 acres	1817 acres	5266 acres	1817 acres
06041	8,027 acres	1,851 acres	Cheatgrass/,histo rical grazing practices	8, 027 acres	1851 acres	8,027 acres	1851 acres
#2-Riparian Systems							
06012	0 miles	1 mi	Grazing practices	1 miles	0 miles	1 miles	0 miles
06012	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06336	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06039	1.5	0	N/A	1.5	0	1.5	0
06041	N/A	N/A	N/A	N/A	N/A	N/A	N/A
#3-Plant Communities							
06012	2493 acres	0 acres	Historical Grazing uses	2493 acres	0 acres	2493 acres	0 acres
06013	715 acres	0 acres	Historical Grazing uses/	715 acres	0 acres	715 acres	0 acres
06336	982 acres	513 acres	Cheatgrass/Histo rical Grazing uses	982 acres	513 acres	982 acres	513 acres
06039	5,266 acres	1817 acres	Cheatgrass/Histo rical Grazing uses	5266 acres	1817 acres	5266 acres	1817 acres
06041	8,027 acres	1,851 acres	Cheatgrass/Histo rical Grazing practices	8,027 acres	1,851 acres	8,027acres	1,851 acres
#3-Animal Communities							
06012	2493* acres	0 acres	Cheatgrass/Histo rical Grazing practices	2493* acres	0 acres	2493* acres	0 acres
06013	715* acres	0 acres	“	715* acres	0 acres	715* acres	0 acres

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Achieving or Moving Towards Achieving	Not Achieving	Causative Factors	Achieving or Moving Towards Achieving	Not Achieving	Achieving or Moving Towards Achieving	Not Achieving
06336	982 acres	513 acres	“	982 acres	513 acres	982 acres	513 acres
06039	5,266 acres	1817 acres	“	5266 acres	1817 acres	5266 acres	1817 acres
06041	8,027 acres	1,851 acres	“	8,027 acres	1,851 acres	8,027 acres	1,851 acres
#4-Special Status, T&E Species							
06012	2493 acres*	0 acres		2493 acres*	0 acres	2493 acres*	0 acres
06013	715 acres*	0 acres		715 acres*	0 acres	715 acres*	0 acres
06336	995 acres*	500 acres	Cheatgrass/Historical Grazing practices	995 acres*	500 acres	995 acres*	500 acres
06039	6683 acres*	400 acres	“	6683 acres*	400 acres	6683 acres*	400 acres
06041	9778 acres*	100 acres	“	9778 acres*	100 acres	9778 acres*	100 acres
#5-Water Quality							
06012	2493 acres*	0 acres	N/A	2493 acres*	0 acres	2493 acres*	0 acres
06013	715 acres*	0 acres	N/A	715 acres*	0 acres	715 acres*	0 acres
06336	1495 acres*	0 acres	N/A	1495 acres*	0 acres	1495 acres*	0 acres
06039	7083 acres*	0 acres	N/A	7083 acres*	0 acres	7083 acres*	0 acres
06041	9878 acres*	0 acres	N/A	9878 acres*	0 acres	9878 acres*	0 acres

*Total allotment acres

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: Air quality is not currently being monitored in the area of the allotments, however it is considered to be within the national and Colorado air quality standards. There are two class 1 (visibility) areas located in northwest Colorado including the Mt. Zirkel Wilderness 120 miles to the northeast and the Flat Tops Wilderness 70 miles to the east. There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action.

Environmental Consequences of the Proposed Action: The grazing management plan would not affect air quality. The projects within the proposed action would result in short term, local impacts to air quality during and after construction of the ponds due to dust being blown into the air. However, airborne particulate matter should not exceed Colorado air quality standards on an hourly or daily basis. Following successful seeding of the sites, airborne particulate matter should return to near pre-construction levels. Impacts to air quality from livestock grazing are not anticipated.

Both prescribed and wildland fires are potentially a significant source of air pollution emissions including particulate matter, volatile organic compounds, and carbon monoxide.

Under the proposed action, all fire activities will be conducted within existing laws that protect air quality. Specifically, all fire activities must comply with the applicable air quality regulations required by FLPMA, the *Clean Air Act*, and the Colorado Air Quality Commission. By complying with applicable air quality standards and regulations, impacts to air quality will be short term and considered acceptable. Prescribed fires are typically smaller than uncontrolled wildfires occurring during peak burning conditions and typically involve less total combustion than wildfires as a result of the more mesic conditions under which prescribed fires are conducted. Resulting in less over all smoke production, also, prescribed fires are conducted under atmospheric conditions that will promote air pollutant dispersion.

Environmental Consequences of continuation of Current Management: Impacts are not anticipated from the current management alternative.

Environmental Consequences of the No Grazing Alternative: None

Mitigation: None

CULTURAL RESOURCES

Affected Environment: The allotment areas of Hammond Draw, Lower Fletcher Draw and Hatch Flats show a solid late Fremont presence with mainly sheltered occupation sites and open camp lithic scatters. Because of their cultural significance and spatial relationship to proposed project areas three Rock shelter sites in Hammond, Fletcher and Quinn Draws were

reevaluated during inventory. A Class III Pedestrian Inventory of 500 feet around the proposed projects in Hammond, Fletcher Draws and Hatch Flats was completed with no new cultural materials found. There is one recorded open campsite with chert concentration on the Cactus Reservoir of the Hatch Flats allotment and one recorded lithic scatter with a concentration of debitage that were also reevaluated. Six recorded Isolated Finds Sites were not reevaluated. There are no recorded sites in the Upper Thirteenmile and Fourteenmile allotments and no proposed projects in those allotments. Eighty percent of these two allotments are 30 percent plus slope. A Class II inventory was completed on the remaining twenty percent with no new cultural deposits found.

Environmental Consequences of the Proposed Action: There is strong potential for destruction of recorded sites including National Register Eligible sites by grazing cattle, particularly in Hammond Draw and Quinn Draw. Hammond Draw Cave may be considered a sacred site. The proposed prescribed fire will not impact known cultural resources of scientific importance.

Environmental Consequences of Continuation of Current Management: There is an ongoing potential for destruction of recorded sites including National Register Eligible sites by grazing cattle, particularly in Hammond Draw and Quinn Draw.

Environmental Consequences of the No Grazing Alternative: There would be no potential for destruction of cultural materials including destruction of National Register Eligible sites by grazing cattle.

Mitigation: 1) Three known Rock shelters will be fenced. 2) The renewed permit will contain avoidance requirements for all recorded sites. 3) The permittee will be required to report any new cultural deposit discoveries. 4) The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has

been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: There are 2 known occurrences of noxious or problem weeds on the allotments being addressed by this permit renewal environmental assessment. These occur in the Fourteenmile Creek bottom of the Fourteenmile allotment (06013) and can easily be eradicated or contained. The invasive alien cheatgrass (*Bromus tectorum*) is present to some extent in virtually all plant communities in the Hammond Draw and Lower Fletcher allotments. Its presence in these communities ranges from a trace to greater than 20% canopy cover in the composition. This species is most prominent in the Alkaline Slopes, Clayey Foothills and Foothill Swale plant communities, particularly within a mile of Highway 64. This area of rangeland was subject to intensive heavy utilization by both cattle and sheep during the first forty plus years of the 20th century due to historic sheep trailing and its proximity to the White River. On the Hatch Flat allotment, cheatgrass is a prominent part of the plant community on Hatch Flats, including the Alkaline Slopes and (Gullied) Swale range sites. About 200 acres of these ecological sites on Hatch Flats were mechanically manipulated and seeded as part of BLM's watershed improvement project in 1963. This project was unsuccessful as cheatgrass is still the dominant component of the vegetation on these sites. Up until 1991, this allotment was used by sheep throughout the critical spring growth period on an annual basis, which is the most probable explanation for the current vegetation expression on site. Since that time, the Cox cattle operation has used the Hatch Flat allotment primarily in April providing it with partial growing season rest on a yearly basis.

The invasive phraetophyte shrub *Tamarix* ssp. is present at scattered locations throughout the Fletcher, Hammond and Hatch Flat allotments primarily at reservoir locations, in some of the main gully bottoms, and in association with several wet weather seeps. From all appearances, it has increased in size and density at these sites within the past 15-20 years. Salt cedar is known to have a number of negative effects on the riparian habitats which it characteristically invades. Among these are: 1) it is a facultative phraetophyte with an extremely high rate of evapotranspiration, resulting in a steady decline in the water table at sites which it invades, 2) it extracts salt from the soil and deposits it on the soil surface beneath its canopy, creating a surface soil environment in which only halophytes can survive, ultimately fostering a monoculture of salt cedar on the site, and 3) such monotypic stands of salt cedar support a much lower diversity of bird species than the native cottonwood or willow potential riparian community.

Environmental Consequences of the Proposed Action: Historic grazing practices such as continuous grazing season use at heavy stocking rates created the early seral cheatgrass dominated plant communities that do not meet the Colorado Standard for upland vegetation and

soils. This situation is probably largely irreversible regardless of the livestock grazing management practices employed now and in the future long term. These early seral rangelands are essentially frozen in time and without a man- induced disturbance such as fire to remove cheatgrass/big sagebrush dominance, accompanied by chemical treatment and seeding of adapted perennial grasses to preempt the return to cheatgrass dominance, these sites will remain unchanged in the future. These areas will likely continue to not meet the Colorado Standard under the Proposed Action, the No Grazing or the Continuation of Current Management Alternatives.

Impacts from the range improvement projects as proposed will create earthen disturbance, which if left unvegetated could provide safe sites for the establishment of noxious and problem weeds. While reservoir and spring development will have no direct local impact on noxious weeds or invasive species, on a watershed and landscape scale, alternative water sources, would in effect enhance livestock distribution, and have a positive impact on plant communities by increasing their resilience to noxious/invasive species establishment and proliferation.

There is low likelihood of noxious/invasive species invading the site proposed for prescribed fire because there will be no earthen disturbance. However, because roads and vehicles are a principal means of weed spread and proliferation, it is important that the project site be monitored on an annual basis, as described in the proposed action.

Tamarix treatment as proposed will 1) increase the diversity of plant species at the selected sites because, if left untreated, salt cedar tends to form a monoculture excluding all other plant species, 2) reverse the decline in the water table where the species presently occurs, and 3) increase the longevity of water storage at the ponds and reservoirs where it occurs, and 4) eliminate the species as a competitor with the native willows and cottonwoods at riparian sites. See the attached Pesticide Use Proposal.

Environmental Consequences of Continuation of Current Management: Adoption of this alternative would mean that noxious and invasive species management would take place on a passive basis. Tamarix would continue to proliferate at the sites it currently inhabits with consequent negative impacts to all water users. Tamarix would invade into new areas.

Environmental Consequences of the No Grazing Alternative: The no-grazing alternative would not result in any significant change over the long term. It is likely that there would be very limited noxious or invasive species management because the grazing permittees are the principal onsite practitioners in the effort.

Mitigation: For *Bromus tectorum*, Compliance with Standards for Rangeland Health through managed grazing, aggressive rehabilitation including aerial and drill seeding with adapted species immediately following wildfire events, and aggressive revegetation of all earthen disturbances. To limit the spread and establishment of noxious and invasive species, all earthen disturbances will be revegetated with adapted grass species. For Tamarix spp.: See the treatment plan, Pesticide Use Proposal as part of the Proposed Action.

MIGRATORY BIRDS

Affected Environment: Migratory bird populations associated with these ranges are widespread and common throughout sagebrush, mountain shrub, Douglas-fir, and pinyon-juniper habitats in this Resource Area. Although a number of species identified as having high conservation interest by the Colorado Partners in Flight program are represented in appropriate habitats (e.g., Virginia's warbler in mountain shrub, gray flycatcher and black-throated gray warbler in pinyon-juniper, and Brewer's sparrow in Wyoming big sagebrush communities), none are narrowly restricted in abundance, distribution, or habitat preference. Although likely that the breeding density of certain migratory birds is suppressed in those areas where cheatgrass and other annual weeds are strongly represented in the understory (i.e., Hatch, Fletcher, and Hammond allotments), those species are otherwise widely distributed and abundant in upland sagebrush communities as well (e.g., green-tailed towhee, Brewer's sparrow).

Environmental Consequences of the Proposed Action: The following grazing-related effects are grouped by similar allotments and pertain to livestock's influence on the functional properties of herbaceous understories in providing forage (e.g., seed, invertebrate substrate) or cover (e.g., ground nesting species) for migratory birds.

Hatch Gulch: Proposed schedule provides substantial increase in time allowed for recovery of understory stature and density synchronous with peak of nest initiation; may prompt minor increase in breeding bird density or enhanced nestling survival on about 25% of allotment acreage (mid-seral shrublands).

Thirteen/Fourteenmile: Strong reduction (51%) in growing season use in Thirteenmile would likely be sufficient to prompt small increases in breeding bird densities or enhanced brood survival across the allotment. Minor grazing use increases are proposed for summer/fall use (22%) in the Fourteenmile allotment, but with stocking beginning as most nesting commences, a slow progressive reduction in ground cover through the nest season (additional 10 AUMs through July) would not be expected to elicit a measurable impairment of breeding bird densities. Bottomland understories, including riparian expression, in the Fourteenmile valley likely to undergo marked improvement with removal of growing season use and a 47% reduction in dormant season use.

Hammond/Fletcher: Proposal would extend early spring use (March through mid-April) to the Hammond allotment which would reduce understory cover on about 1600 shrubland acres, but this effect would be offset by overall 32 to 49% reductions in growing season use (through mid-May) on 3100 shrubland acres, including 50-60% reductions in both pastures (alternate years in Fletcher) during the mid-April to mid-May period and slight reductions (10-16%) in dormant season use in the Fletcher allotment. The same timeframe would be allowed for herbaceous recovery as current, but reduced use intensity and more opportune timing would prompt accelerated development of herbaceous cover and forage through the nesting and brood-rearing season and may offer slightly improved nestling survival (i.e., improved forage conditions) for resident nesting species.

Construction or development of the proposed livestock management features would be widely dispersed and of extremely limited extent. Most projects (10) are located in 1960's vintage juniper chainings or recent burns that typically support low breeding bird densities and few species of high conservation interest. The remaining projects (5) are associated with sagebrush parks where small numbers of nesting high interest species (e.g., Brewer's sparrows) would be encountered if construction were to take place during the months of mid-May through mid-July. Efforts to avoid vegetation removal during equipment transport would limit potential nest disruption to diminutive levels (e.g., less than 6 nest attempts).

Treatment of scattered stands or isolated clumps of tamarisk during June and July would have no marked influence on migratory bird nest habitat and would likely involve few nest attempts (e.g., blue-gray gnatcatcher or song sparrow). Imazapyr is practically non-toxic to virtually all vertebrate and invertebrate life forms. Limited quantity and distribution of use and unlikely means for contact reduce the risk of exposure and harm to negligible levels.

Proposed burning of regenerating juniper-dominated woodlands (300 acres) would likely take place in the fall after the migratory bird breeding season. These young woodlands characteristically support little woodland (simple structure) and sagebrush (intervening trees) obligates and the typical bird community is comprised of generalists at low abundance and diversity (e.g., chipping sparrow, western meadowlark, vesper sparrow). In the longer term, redeveloping Wyoming big sagebrush parks interspersed with residual stands of trees would provide improved habitat characteristics for sagebrush obligates such as Brewer's sparrow and green-tailed towhee.

Environmental Consequences of Continuation of Current Management: Slow community improvements (e.g., ground cover, native species composition) associated with the continuation of current grazing practices would have little influence on the abundance or distribution of breeding migratory birds over the course of this permit. There would be no scheduled developments (e.g., pits or springs) that could disrupt breeding bird activities.

Environmental Consequences of the No Grazing Alternative: Removal of cattle would be expected to increase herbaceous ground cover on 6500 acres of mid- to late-seral shrublands and recently burned habitats across all allotments as a source of cover and forage for nesting migratory birds. However, grazing by horses and elk would persist in substantially reducing herbaceous ground cover expression in the Fletcher and Hammond allotments (5800 acres), particularly during the dormant season. This alternative would probably have little influence on understory conditions on those 4,200 acres of early-seral bottomland and lower elevation sagebrush/saltbush stands where annual weeds exert strong competitive influences (about 46% of shrubland types associated with permit renewal) and in pinyon-juniper and Douglas-fir woodlands (nearly 60% of permit area).

Breeding birds associated with a desert-scrub and mesquite-grassland in southern Arizona responded to two- to four-fold increases in herbaceous vegetation density by increasing in abundance by 35% and 87% within four years (Krueper et al, 2002). Because of moderate use intensity attributable to current livestock use and the continued grazing influences of horses and elk, it is reasonable to assume that breeding bird abundance in these shrub-steppe communities

would respond to understory improvements attributable to cattle removal at levels near the lower end of this spectrum.

Mitigation: Vegetation clearing during cross-country transport of construction equipment to remote reservoir or spring sites should be strictly avoided. Any discernible tracks or trails generated by equipment transport should be conditioned by the permittee to deter any subsequent vehicle use (e.g., woody material pulled onto track).

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: Hatch Flat, Fletcher, and Hammond Draw allotments drain directly into the lower White River; the river and 100-year floodplain being designated critical habitat for an endangered population of Colorado pike-minnow. Presently, habitat occupied by this fish is limited to the river below the reservoir's dam, about 4.5 reservoir miles from the nearest point of tamarisk control. There are no riverine or floodplain habitats under federal grazing administration.

The northern goshawk, a BLM sensitive woodland raptor, has potential to occur in small numbers (perhaps 1 or 2 pair) in scattered Douglas-fir tracts on steep north-facing slopes in the Fourteen Mile and Upper Thirteen Mile allotments.

The Lower Fletcher Draw, Hammond Draw, and Hatch Flat allotments encompass a modest amount of upland sagebrush habitats (about 500 acres on either side of the river) that have a history of occupation by greater sage-grouse. There have been no indications of sage-grouse north of the river since the 1980's and the limited amount of sagebrush on the toeslopes above the White River valley are xeric with poorly developed understories that contain a considerable annual weed component.

Environmental Consequences of the Proposed Action: Overall reductions in the intensity of growing season use and allowing for increased herbaceous expression on most upland and drainage situations within the Hatch, Fletcher, and Hammond allotments would reduce sediments ultimately entering the lower White River in the long term and contribute to incremental reductions in sediment deposition and turbidity in occupied pike-minnow habitats below Kenney Reservoir.

Proposed tamarisk control within these allotments would entail annual imazapyr application on up to 3 acres (1 pound active ingredient per acre) for a 3 year period. Due to the high solubility of imazapyr in water and its relatively slow rates of breakdown in soil, it is likely that trace amounts of product would eventually reach the White River. Because imazapyr breaks down rapidly in free water environments (intervening 4.5 miles of Kenney Reservoir) and it is practically non-toxic to fish and aquatic invertebrates, there is no reasonable likelihood that this herbicide would have any adverse influence on pike-minnow populations. Further, treatments would help eliminate a source of tamarisk seed that is delivered to the river and its floodplain and help meet one of the conservation objectives for the pike-minnow, namely maintaining or restoring proper functioning conditions to the river and its channel features.

The Douglas-fir habitats best suited for goshawk nesting are steep and inaccessible to livestock. Implementation of the proposed grazing prescriptions in the Fourteen Mile and Upper Thirteen Mile allotments would have no adverse influence on potential goshawk nest habitat or prey availability (see Migratory Bird section).

Proposed grazing prescriptions for the Hatch Flat, Fletcher, and Hammond Draw allotments would be expected to enhance the density and height of herbaceous ground cover during the nesting and early brood-rearing seasons (see Migratory Bird section), thereby improving protective nest and brood cover, and forage/forage substrate (e.g., invertebrates) for developing young in the event these ranges are reoccupied by sage-grouse. These beneficial effects would likely be primarily confined to mid-seral sites (about 200 acres in each allotment) that are not severely compromised by cheatgrass infestations.

Environmental Consequences of Continuation of Current Management: Continuation of current management is expected to maintain habitat conditions for Colorado pike-minnow and northern goshawk, and maintain static trends in potential sage-grouse habitat.

Environmental Consequences of the No Grazing Alternative: The no grazing alternative would have similar influences on sage-grouse and aquatic habitats associated with the lower White River allotments as those discussed under the proposed action. Removal of livestock from the upper Piceance allotments may prompt minor gains in prey availability (i.e., small mammals and birds) and could be expected to help bolster nestling survival during lean years.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: This action will have no direct impact on special status species. Presently, sagebrush communities within these allotments have only marginal utility for sage-grouse; likely reflecting the general condition across these xeric shrublands where degraded understories (i.e., low herbaceous plant density and strong complement of introduced annual weeds) have reduced suitable nest habitat below the point where a population could be sustained. Historical in nature, failings in meeting the land health standard in this specific regard (i.e., sage-grouse) cannot undergo substantive change without concerted intervention (e.g, chemical suppression of weeds, supplemental seeding). However, the proposed action and no action alternatives would enhance development of herbaceous ground cover during the reproductive season of both sage-grouse and goshawk and would aid in expanding the number of acres meeting or better meeting (i.e., goshawk) the standard, particularly with reestablished sage-grouse use in Hatch Gulch and the Fletcher/Hammond pastures.

Improved ground cover conditions and tamarisk control associated with the proposed action would be expected to lead to long term incremental improvements in aquatic habitat conditions for Colorado pike-minnow below Kenney Reservoir (e.g., reduced sedimentation). Herbicide use to control tamarisk may affect, but would be unlikely to adversely affect this fisheries.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4).

Affected Environment: Two Colorado BLM sensitive plant species occurs near the project area, the debris milkvetch (*Astragalus detritalis*) and the Piceance bladderpod (*Lesquerella parviflora*). The debris milkvetch occurs on some of the alluvial terraces that are within a mile wide corridor of Hwy 40 between Massadona to the west and Wolf Creek to the east. Nearly all of the known populations of the debris milkvetch occur immediately south of Hwy 40 on terraces and adjoining slopes covered with small cobbles. This plant occurs on the steep west facing slope of School Gulch in an area of less than 40 acres. Another BLM sensitive species, Piceance bladderpod (*Lesquerella parviflora*), does occur within the allotment. The habitat for this plant is the loose shale scree on the very steep, south aspect slopes of Deer Gulch and Davis Gulch. These steep south facing slopes are sparsely vegetated with beardless bluebunch wheatgrass, Indian ricegrass and occasional serviceberry and scrub oak shrubs. The extent of the populations of this plant is not known due to the difficulty in inventorying the very steep loose scree slopes. Populations of the plant that have been observed are very healthy, productive and show no sign of impact from current livestock management. General observations are that the plant is well adapted to the constant down slope movement of shale scree which naturally occurs. The geologic substrates for the other special status plants known within the White River Field Office do not exist near the project area. Specific habitat requirements for the special status plants that occur within the White River Field Office are not present within the Lower Fletcher Draw or Hatch Flat grazing allotment.

Environmental Consequences of the Proposed Action: Livestock selection and consumption of all these special status plant species is relatively insignificant because of the size of the plant or the barrenness of the habitats on which they occur. The livestock grazing impacts that have been observed to the special status plants have been more mechanical damages from trampling by livestock. Most of the occurrences of trampling have been associated with cattle trailing across plant habitats to watering areas. Populations of the Piceance bladderpod that have been observed have shown no sign of impact from current livestock grazing practices. It is likely that the loose scree, sparsely vegetated slopes are not desirable foraging areas for cattle even though cattle can effectively utilize such steep terrain. It is anticipated that cattle grazing would result in less probability of livestock utilizing habitats for this plant. No impact to this plant is anticipated. The construction of the proposed projects including project use and maintenance is not expected to have any affect of any special status plant.

Environmental Consequences of Continuation of Current Management: Continuation of grazing is not expected to change current grazing patterns. No impact to any special status plant is expected by continued grazing on the allotment.

Environmental Consequences of the No Grazing Alternative: Not constructing these projects will not have any affect on any special status plant.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species:
There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Hazardous or solid wastes are not expected to be a part of the proposed action; however, these materials may accidentally be introduced in the environment through the implementation of the proposed action. Fuel, oil, grease, and antifreeze are all associated with vehicles use and fire suppression equipment associated with implementing the proposed action and would only be introduced into the environment because of equipment failure. Minute loss of these materials through normal operation of equipment, maintenance and fueling procedures are not considered spills. Spills are generally defined as the loss of large quantities of these materials into the environment and are determined to be a spill on a case-by-case basis.

Environmental Consequences of the Proposed Action: For any given accident or incident involving hazardous materials, consequences will be dependent on the volume and nature of the incident and material released. Short term impacts such as contaminations of soils, vegetation, and surface water could occur.

Environmental Consequences of Continuation of Current Management: Impacts would be the same as the proposed action.

Environmental Consequences of the No Action Alternative: No hazardous wastes would be introduced into the environment under the no action alternative.

Mitigation: None

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5) is a table

Affected Environment: The table below identifies the drainages that intersect with the allotment boundaries, what the drainage is tributary to, the stream segment the drainage falls into, and the corresponding number of acres in each of the watersheds.

MAP CODE NAME	DRAINAGE NAME	TRIBUTARY	STREAM SEGMENT	ACRES IN ALLOTMENT
W.FG	Fletcher Gulch	White River	13a	2,880
W.FG.YG	Yanks Gulch	Fletcher Gulch	13a	2,097
W.HM	Hammond Draw	White River	13a	5,806
W.PD	Priest Draw	White River	13a	939
W.QD	Quinn Draw	White River	13a	1,480
W.RW	Red Wash	White River	13a	25

MAP CODE NAME	DRAINAGE NAME	TRIBUTARY	STREAM SEGMENT	ACRES IN ALLOTMENT
W.SC	Spring Creek	White River	13a	1,140
W.SL	School Gulch	White River	13a	1
WR	White River		13a	3,915
W.PC.DA	Davis Gulch	Piceance Creek	16	2.5
W.PC.DT	Dry Thirteen Mile Creek	Piceance Creek	16	499
W.PC.FM	Fourteen Mile Creek	Piceance Creek	16	2,004
W.PCDT.NH	North Hollow	Dry Thirteenmile Creek	16	903
W.PCDT.SC	Summer Camp Gulch	Dry Thirteenmile Creek	16	68
W.PCDT.TC	Turkey Canyon	Dry Thirteenmile Creek	16	26
W.PCDTSC.MG	Moonlight Gulch	Dry Thirteenmile Creek	16	37
W.PCFM.CG	Cabin Gulch	Fourteenmile Creek	16	262
W.PCFM.DC	Dark Canyon	Fourteenmile Creek	16	9.3
W.PCFM.GG	Moonlight Gulch	Fourteenmile Creek	16	9.3
W.PCFM.RD	Road Draw	Fourteenmile Creek	16	409
W.PCFM.TM	Thirteenmile	Fourteenmile Creek	16	428
W.PCFMTM.TM	Twelvemile	Fourteenmile Creek	16	210

The “Status of Water Quality in Colorado – 2004” (April, 2004) was reviewed for information related to the allotments drainages. Within the allotments, all tributaries to the White River from a point immediately above the confluence with Piceance Creek are identified in segment 13a, and all tributaries to Piceance Creek, from the source to the confluence with the White River are identified in segment 16.

Both reaches are considered to be "Use Protected" reaches. Their designated beneficial uses are: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For these reaches, minimum standards for three parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0 and Fecal Coliform = 2000/100ml and 630/100 ml E. coli. In addition standards for inorganic and metals have also been listed and can be found in the table of stream classifications and water quality standards. This segment retained its Recreation Class 2 designation after sufficient evidence was received that a Recreation Class 1a use was unattainable.

Environmental Consequences of the Proposed Action: Employment of rest from grazing, pasture rotation and shortened grazing seasons would allow the vegetation condition to improve. Any improvement to vegetation cover would also help to reduce sediment transport, which is the major water quality contaminant for the watersheds of Piceance Creek and the White River.

Impacts to hydrology and water quality from development of the springs and reservoirs would be similar to other surface disturbing activities. Some of these impacts would be exposure of soil surface to wind and water erosion and reduced water quality due to erosion of disturbed areas. These impacts would be short term until re-vegetation has occurred. Development of alternative water sources (e.g. ponds) would be favorable to watershed conditions in that it would allow for a better distribution of livestock and collect suspended sediment from overland flows. Any range

improvement project that improves the vegetation cover and the upland watersheds ability to retain water, would be advantageous to watershed stability and improved water quality of the water coming off of these watersheds.

Infiltration rates are likely to decline following fires and could cause an increase in overland flows. Flashy runoff can be expected in bare areas that are subjected to high intense storms immediately after burning. These runoff events are the major water quality hazard of fires, because of an increase in erosion and sediment yields.

Although impacts from the eradication of Salt Cedar could result in short term surface disturbance, by eliminating this species it would allow water to be available for more desirable watershed protecting species.

Environmental Consequences of Continuation of Current Management: Current management of continual grazing during the growing season without any rest contributes to erosion and water quality problems. Typically, annual runoff is dynamic and dependent aspects we control, such as the amount of vegetation retained for watershed protection and vegetation density. Depleting the vegetation cover needed to protect watersheds from raindrop impact and runoff could cause long-term erosion and water quality problems for these tributaries of Piceance Creek and the White River.

Environmental Consequences of the No Grazing Alternative: By implementing the no grazing alternative, impacts to vegetation from livestock would not occur.

Mitigation: Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*.

Finding on the Public Land Health Standard for water quality: Currently the White River and Piceance Creek drainages meet the Public Land Health Standard and would continue to do so with the implementation of the proposed action. Many of the upper tributaries which are ephemeral and flow in direct response to storm events do not meet the standards during periods of flow. By improving the cover and distribution of livestock, the watershed cover would begin to improve causing these drainages to move towards meeting the standards.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: There is approximately one mile of riparian zone associated with Fourteen Mile Creek, of which roughly 0.5 mile is located within the Fourteen Mile allotment (all is on BLM). Riparian vegetation observed included sedges, bull rushes, pockets of young willows in areas, as well as Canada thistle, mullein and bluegrass. Some areas of the stream have sagebrush and junipers growing nearly to the water edge. Sinuosity and gradient appeared in balance with landscape setting. The system seems vertically stable and little evidence of excessive sediment was observed. However, the streambank vegetation present quite likely would not withstand a high streamflow event. Riparian plant vigor is being suppressed and there is little source of coarse woody debris. The floodplain and channel characteristics likely are not

adequate to dissipate energy associated with a high flow. Overall, the stream condition was determined to be Functional-At Risk with a no apparent trend.

Two spring-fed channels in the Hammond Draw allotment each bear several hundred yards of riparian vegetation. These consist of a relatively broad and dense inland saltgrass community (with a considerable tamarisk component) in a tributary of Hammond Draw and a dense sedge/coyote willow community in a small unnamed tributary of the White River. Both systems are in proper functioning condition and do not appear to sustain any substantive grazing use by wild or domestic ungulates.

Environmental Consequences of the Proposed Action: The proposed action is designed to allow for complete growing season rest of the riparian growth in Fourteenmile Creek. Proposed livestock use levels during the dormant season would be reduced from current levels by about 47%. By providing complete growing season rest and increasing the amount of vegetation remaining into spring (i.e., more effective capture and retention of sediments), the proposed action should allow for accelerated improvement in the vigor and density of riparian vegetation and enhanced channel and bank stability.

General (32 to 49%) and allotment-specific (48-62%) reductions in growing season use within the Fletcher and Hammond allotments are substantive and channel and riparian conditions in those scattered parcels within the allotments would likely improve or remain in proper functioning condition. Proposed water developments in these allotments would typically tend to provide supplemental sources of upland water and decrease reliance (and use intensity) on channel-borne sources and their attendant riparian or wetland communities. Concern is extended, however, to development of West Hammond Spring #1. This development would lie in close proximity to a low-elevation riparian system in a proper functioning state composed of dense sedge and coyote willow growth with scattered mature Fremont cottonwood trees. The proposed spring development is associated with a 1-acre sagebrush park situated in extensive pinyon-juniper woodlands—generally a community matrix with low forage production potential. By encouraging livestock use of this area, there is a reasonable likelihood that cattle would make considerable use of this riparian system as a forage base and jeopardize current vegetation expression and channel stability.

Tamarisk treatment in channel situations would promote herbaceous development in those areas suppressed by tamarisk overstories. However, in those spring-borne riparian reaches dominated by inland saltgrass, channel and bank stability is reliant on a somewhat facultative species whose rooting mass is only moderately resistant to the force of water. Particularly in these unconsolidated, depositional soils, larger wheeled or tracked vehicle use (especially turning or under load) would be expected to compromise these swale-like features, at least in the short term, and increase the risk of channel/bank/floodplain erosion (e.g., inopportune flooding events before vegetation redevelopment).

Environmental Consequences of Continuation of Current Management: With respect to riparian and channel conditions in Fourteenmile Creek, current livestock grazing regimens appear to be compatible with system maintenance, but may be retarding progress toward proper functioning condition to some degree (no clear trend in this stream's condition).

Environmental Consequences of the No Grazing Alternative: Under the no grazing alternative, riparian vegetation would not be impacted by livestock. Stream conditions would likely improve to Proper Functioning Condition over time.

Mitigation: •It is recommended that the proposed West Hammond Spring #1 not be developed.

•Heavy equipment should not be used to grub out tamarisk in channel or floodplain areas that support well-developed swale or riparian growth (e.g., saltgrass).

Finding on the Public Land Health Standard for riparian systems: Current conditions in Fourteen Mile Creek do not achieve the Public Land Health Standard for riparian systems. Riparian plants, while present, do not exhibit high vigor or a diverse age class. However, under the proposed action, reduced cattle numbers and elimination of summer use are expected to result in the improvement of the stream condition over time, resulting in achieving, or moving toward achieving the land health standard for riparian systems.

Spring-borne riparian segments identified in lower Hammond Draw are in Proper Functioning Condition and thereby would continue to meet the land health standard under the no action and current management alternatives. The proposed action would yield similar effects with the exception of risk associated with development of West Hammond Spring #1 (see text above). The mitigation measure which dismisses plans to develop this spring would prevent localized failing of the standard.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: All five allotments covered in this grazing permit renewal have had their soils covered in the Rio Blanco County Soil survey (published by USDA-SCS, 1981). See Soils/Range Site tables for each individual allotment below in the Vegetation section. Soils that are occupied with mid-seral, late seral, or the Potential Natural Community (refer to narrative in the vegetation section below) have sufficient cover of native plant species and are

producing sufficient litter and ground cover to protect the site and minimize runoff. These soils are meeting the Standard for upland soils.

Environmental Consequences of the Proposed Action: Surface litter, plant canopy cover, ground cover and microphytic crust cover would increase on most of the mid-seral and some of the early seral rangelands as a result of the critical growing season rest and regrowth opportunities provided by livestock management under the proposed action. The rest and regrowth opportunities are expected to increase the cover of native perennial grass species important for soil protection. On the soils occupied by a late seral or PNC plant community, cover of perennial vegetation is not expected to change significantly from the current situation.

There will be some soil disturbance associated with the construction of the proposed reservoirs. The amount of this disturbance is expected to be less than two acres, 90% of which is expected to be revegetated with adapted herbaceous species. The negative impact of this disturbance will be offset by the watershed wide benefit to soils as a result of both improved livestock distribution and an overall increase in herbaceous cover. Spring development will result in some short-term soil disturbance. The minor disturbance associated with spring development will be offset by long term enhancement of soil stability on the landscape as a result of more optimum livestock distribution in the pastures of the affected allotments.

The effects of prescribed burning on soils is directly related to the depth and intensity of soil heating as well as vegetation removal which exposes the soil to wind and water erosion. Conducting the proposed burns while soil and live fuel moisture is high, combined with light to moderate fuel loading, will result in lower surface temperatures and short burning duration. As a result, soil heating should not be severe enough to cause significant changes in physical properties of the soil, mortality of perennial grasses and forbs, and mortality of the seed bed. It is anticipated that soil erosion will increase for one to three growing seasons post burn due to increased soil surface exposure. Within that time frame herbaceous vegetation cover should increase above pre-burn levels resulting in increased soil stability, water infiltration, and reduced soil erosion.

Environmental Consequences of Continuation of Current Management: Soil plant and litter cover would not be expected to change significantly from the present situation except on the Hammond Draw and Lower Fletcher allotments where current grazing management practices are fostering a positive change in these attributes.

A related effect of not implementing the proposed prescribed fires is the increased chance of large fire occurrence and improved ability for wildland fires to be managed under less desirable environmental conditions.

Environmental Consequences of the No Grazing Alternative: With no grazing, most of the areas currently grazed by cattle would experience an increase in soil surface litter and an increase in perennial vegetation in the short term. This increase in perennial vegetation cover is most likely to occur on ecological sites rated as mid-seral and on some of the early seral rangelands. On most of the early seral rangelands (the Foothill Swale, Salt Desert Breaks, Loamy Salt Desert, Alkaline Slopes and Stony Foothills ecological sites) with a dominant

cheatgrass component, no increase in perennial vegetation cover is likely to occur with no grazing. These early seral sites would continue to not meet the Land Health Standard for upland soils. On most late seral and PNC rangelands, vegetation cover is not expected to change from the current situation. With the exception of the early seral sites, the Land Health Standard for upland soils would be met under a no grazing scenario.

Mitigation: Continue monitoring of the current key areas and add additional Daubenmire canopy coverage transects to identify trends and changes in plant community cover and composition.

Finding on the Public Land Health Standard for upland soils: The soils with mid-seral, late seral and PNC as well as those early seral communities experiencing increases in perennial vegetation cover would meet the Land Health Standard for upland soils.

As noted in the vegetation section below, historic grazing practices created the situation in which most of the identified early seral plant communities do not meet the Land Health Standard for upland soils. Once an ecological site reaches the threshold wherein cheatgrass dominates the herbaceous cover and there are too few desirable perennial species to compete with it, the situation is largely irreversible regardless of the livestock grazing management practices employed now or in the future. These early seral rangelands are essentially frozen in time and, without a man induced disturbance such as selective chemical treatment and subsequent seeding of desirable perennial species to preempt cheatgrass dominance in these communities, these sites will remain unchanged in the future.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The following table lists the plant community appearance for each of the ecological sites or woodland types on one or more of the five allotments along with the predominant plant species comprising the composition of each community. Forb species, though important to the diversity of a community and comprising up to 25 to 30% of the composition of several of the plant communities listed, are not presented in the following table because they generally are not significant contributors to the general appearance of the community.

Ecological Site/ Woodland Type	Plant Community Appearance	Predominant Plant Species in Plant Community
Brushy Loam	Deciduous Shrub/grass Shrubland	Serviceberry, oakbrush, snowberry, nodding brome, sedge, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
Alkaline Slopes	Shrubland/Grass	Greasewood, Wyoming big sagebrush, shadscale, winterfat, galleta, western wheatgrass
Deep Clay Loam	Grass/Open Shrub Shrubland	Western wheatgrass, slender wheatgrass, mutton grass, squirreltail, junegrass, Letterman and Columbia needle grasses, mountain big sagebrush
Salt desert Breaks	Grass/Open Shrub Shrubland	Galleta, Colorado wildrye, Indian rice grass, shadscale dwarf rabbitbrush, Wyoming big sagebrush, Utah juniper

Ecological Site/ Woodland Type	Plant Community Appearance	Predominant Plant Species in Plant Community
Foothill Swale	Grass/Open Shrub Shrubland	Basin wildrye, western wheatgrass, slender wheatgrass, streambank wheatgrass, Indian rice grass, Nevada bluegrass, basin big sagebrush, fourwing saltbush, rubber rabbitbrush
Loamy Slopes	Mix Shrub/grass Shrubland	Mountain mahogany, bitterbrush, Utah serviceberry, mountain big sagebrush, Letterman needlegrass, beardless bluebunch wheatgrass, sedge, western wheatgrass, junegrass, Indian ricegrass
Clayey Slopes	Mixed Grass/Shrubland	Colorado wildrye, shadscale, winterfat, Indian ricegrass Mutton bluegrass, Wyoming big sagebrush, dwarf rabbitbrush
Sandy Saltdesert	Grass/Open shrub shrubland	Needle and thread, Indian ricegrass, galleta, sand dropseed, shadscale, Wyoming big sagebrush, dwarf rabbitbrush
Loamy Saltdesert	Mixed Grass/Shrubland	Galleta, needle and thread, Indian ricegrass, shadscale, Gardners saltbush, dwarf rabbitbrush
Mountain Loam	Grass/Open Shrub Shrubland	Polyanthus brome, nodding brome, slender wheatgrass, bearded wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, low rabbitbrush, snowberry, serviceberry
Mountain Swale	Grass/Open Shrub Shrubland	Basin wildrye, polyanthus brome, nodding brome, slender wheatgrass, bearded wheatgrass, Letterman and Columbia needle grasses, sedges, rushes, mountain big sagebrush, rubber rabbitbrush, snowberry,
Rolling Loam	Big Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, spineless horsebrush, bitterbrush, western wheatgrass, Indian rice grass, needle and thread, junegrass, Nevada and mutton bluegrass
Stony Foothills	Grass/Open Shrub Shrubland	Beardless bluebunch wheatgrass, western wheatgrass, needle-and-thread, junegrass, Indian rice grass, fringed sage, Wyoming big sagebrush, black sagebrush, Utah serviceberry, pinyon and juniper
Pinyon- Juniper	Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, Utah serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, junegrass, Indian ricegrass, mutton grass

The following table shows the seral rating system used by BLM to rate rangeland plant communities in comparison to the potential natural plant community for a particular rangeland site.

ECOLOGICAL SITE SIMILARITY RATINGS	
Seral Rating	% Similarity to the Potential Natural Plant Community (PNC)
Potential Natural community (PNC)	76-100% composition of species in the PNC
Late-Seral	51-75% composition of species in the PNC
Mid-Seral	26-50% composition of species in the PNC

Early-Seral	0-25% composition of species in the PNC
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The following tables show an estimate of the public land acreage falling within one of the seral ratings for each ecological site on each allotment. These estimates are based upon professional judgments of the Rangeland Management Specialist trained in the use of the rating system. Nearly all ecological sites were visited during the field seasons of 1998- 2004 for a plant community assessment of the Colorado Public Land Health Standards for each allotment.

06041 LOWER FLETCHER DRAW ALLOTMENT						
Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allot.	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
Rolling Loam	94	0	0	94	0	94
Loamy Saltdesert	276	0	0	66	210	276
Clayey Slopes	205	0	45	160	0	205
Stoney Foothills	900	0	0	778	122	900
Loamy Saltdesert/Sandy Saltdesert	32	0	0	0	32	32
Alkaline Slopes	83	0	0	0	83	83
Foothill Swale	365	0	0	0	365	365
Saltdesert Breaks	1107	0	0	305	802	1107
Sandy Saltdesert	29	0	0	0	29	29
P/J Woodland/Clayey Slopes	6535					0
Gullied Swale	208	0	0	0	208	208
Rock outcrop	39	0	0	0	0	0
Burn						
Total	9878	0	45	1403	1851	3299
% BLM Acres Classified	33	0	1	43	66	

As is shown for the Lower Fletcher Draw Allotment, 1448 acres or 44 % of the classifiable ecological sites on the allotment represent plant communities within the acceptable thresholds for healthy communities and within acceptable limits of a desired plant community as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover and litter for soil protection and sufficient forage production to meet forage demands and provide for long term sustainability. A majority of the allotment acreage, 66% or 6535 acres, is Pinyon-Juniper woodlands; this acreage is unclassifiable by seral stage. The remaining acreage, 1851 acres are early seral sites on the northern end of the allotment that have a significant amount of cheatgrass in their composition due to historical livestock overutilization. While these sites have a majority of desirable perennial species in their composition, they do not meet the Land Health Standards for Rangeland health due to the presence of cheatgrass.

06336 HATCH FLAT ALLOTMENT						
Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified

06336 HATCH FLAT ALLOTMENT Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
Alkaline Slopes	389	0	0	79	310	389
P/J Woodland/Rolling loam	80	0	0	80	0	80
P/J Woodlands/Clayey Slopes	267	0	95	172	0	267
Clayey Slopes	24	0	0	24	0	24
Rolling Loam	53	0	0	53	0	53
Stoney Foothills	103	0	0	83	20	103
Salt-desert Breaks	1	0	0	0	1	1
Sandy Salt-desert	1	0	0	0	1	1
Rock Outcrop	396	0	0	0	0	0
Gullied Torrifluents	181	0	0	0	181	181
Total	1495	0	95	491	513	1099
% BLM Ac Classified	74	0	9%	45%	47%	

As shown for the Hatch Flat allotment, 54 % of the ecological sites on the allotment represent plant communities within the acceptable thresholds for healthy communities and within acceptable limits of a desired plant community as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and sufficient forage production to meet forage demands and provide for sustainability. The mid seral sites are primarily Wyoming big sagebrush dominated sites that occur above and on both sides of Red Wash. The early seral sites occur in Red Wash proper and are primarily classified as such due to a high percentage of the alien cheatgrass (*Bromus tectorum*) in the plant composition on site. These sites were degraded from excessive use by sheep during the first third of the 20th century. Though these early seral sites may have significant desirable perennial species in their composition, they do not meet the Colorado Public Land Health Standards for species diversity, soil protection or forage production; however, their condition would not significantly change with or without livestock grazing.

06039 HAMMOND DRAW ALLOTMENT Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
Rolling Loam	214	0	0	131	83	214
Loamy Salt-desert/Sandy Salt-desert	25	0	0	0	25	25
Loamy Salt-desert	24	0	0	0	24	24
Clayey Slopes	1376	0	0	562	814	1376
Alkaline Slopes	272	0	0	0	272	272
Stony Foothills	939	0	0	795	144	939
Salt-desert Breaks	285	0	0	5	280	285
Foothill Swale	285	0	0	90	175	285
Clayey Foothills	55	0	0	55	0	55
P/J Woodland/Clayey Slopes	2430	0	0	0	0	0

06039 HAMMOND DRAW ALLOTMENT Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
P/J Woodland/Rolling Loam	353	0	0	0	0	0
P/J Woodland	834	0	0	0	0	0
Total	7083	0	0	1638	1817	3455
% BLM Acres Classified	48	0	0	47	53	

As shown for the Hammond Draw allotment, 1638 acres, or 47% of the classifiable ecological sites on the allotment represent plant communities within the acceptable thresholds for healthy communities and within acceptable limits of a desired plant community as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover and litter for soil protection and sufficient forage production to meet forage demands and provide for long term sustainability. A majority of the allotment acreage, 51% or 3,617 acres is pinyon-juniper woodlands; this acreage is unclassifiable by seral stage. The remaining 1817 acres are early seral sites on the northern end of the allotment that have a significant amount of cheatgrass in their composition due to historical livestock over utilization. While most of these sites have a majority of desirable perennial species in their composition, they do not meet the Colorado Public Land Health Standards due to the presence of cheatgrass.

06012 Upper Thirteenmile/Fourteenmile Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
Rolling Loam	6	0	0	6		6
Brushy Loam	74	0	0	74	0	74
Loamy Slopes	10	0	0	10	0	10
Stony Foothills	5	0	0	5	0	5
Mountain Swale	21	0	0	21	0	21
Deep Loam	16	0	0	16	0	16
Clayey Slopes	0	0	0	0	0	0
Mountain Loam	211	0	0	211	0	211
Pinyon/Juniper	374					0
Total	718	0	0	343	0	343
% BLM Ac. Classified	47	0	0	100	0	

06013 Fourteenmile Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
Rolling Loam	12	0	0	12	0	12
Brushy Loam	422	0	72	350	0	422
Loamy Slopes	22	0	0	22	0	22
Stony Foothills	167	0	95	72	0	167

06012 Upper Thirteenmile/Fourteenmile Ecological Site Similarity Ratings						
ECOLOGICAL SITE	Total BLM Ac. In Allotment	PNC	Late-Seral	Mid- Seral	Early-Seral	BLM Ac. Classified
Foothill Swale	29	0	0	29	0	29
Loamy Slopes/Mountain Loam	168	0	0	168	0	168
Mountain Loam	42	0	0	42	0	42
Mountain Swale	28	0	0	28	0	28
Deep Loam	40	0	0	40	0	40
Pinyon/Juniper	1553	0	0	0	0	0
Total	2483	0	167	763	0	930
% BLM Ac. Classified	37	0	18	82	0	

Analysis of Forage Production of Allotments in this Permit Renewal

Lower Fletcher Allotment Soils/Ecological Sites

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES/ AUM	AUMs
Billings silty clay loam,0-5%slopes	Alkaline Slopes	44.87	14	3
Cliffdown-Cliffdown Variant complex,5-65%slopes	Salt desert Breaks	729.82	16	46
Colorow sandy loam	Sandy Salt desert	29.38	16	2
Forelle loam, 8-15%slopes	Rolling Loam	37.76	10	4
Piceance fine sandy loam,5-15%slopes	Rolling Loam	55.88	10	5
Havre loam,0-4%slopes	Foothill Swale	364.84	8	46
Kinnear fine sandy loam,1-5%slopes	Loamy Salt desert	275.86	14	20
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	204.7	12	17
Nihill channery sandy loam,5-50%slopes	Salt desert Breaks	376.74	16	23
Potts-Begay fine sandy loams,2-7%slopes	Loamy Salt desert/Sandy Salt desert	31.93	14	2
Rentsac-Moyerson-Rock Outcrop,complex,5-65%slps	PJ Woodlands/Clayey Slopes, 80% Suitable	6534.6	14	373
Rock Outcrop	None	38.78	0	0
Torrifluvents, gullied	None	207.55	15	14
Torrorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills, 80% Suitable	899.51	18	40
Turley fine sandy loam,0-3%slopes	Alkaline Slopes	31.54	14	2
Uffens loam,0-5%slopes	Alkaline Slopes	6.88	14	0
Water	None	7.23	0	0
Total		9877.87		597

Hammond Draw Allotment Soils/Ecological Sites

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES/ AUM	AUMs
Abor Clay Loam,5-30%slopes	Clayey Foothills	0.13	12	0
Cliffdown-Cliffdown Variant complex,5-	Salt desert Breaks	285.31	16	18

SOILUNIT NAME	ECOLOGICAL SITE	ACRES	ACRES/ AUM	AUMs
65%slopes				
Dollard silty clay loam,15-40%slopes	Clayey Foothills	54.97	12	4
Forelle loam, 3-8%slopes	Rolling Loam	82.38	8	10
Yamac Loam,2-15%slope	Rolling Loam	88.61	8	11
Piceance fine sandy loam,5-15%slopes	Rolling Loam	43.17	8	5
Glendive fine sandy loam	Foothills Swale	285.47	8	36
Uffens loam,0-5%slopes	Alkaline Slopes	90.85	14	7
Billings silty clay loam,0-5%slopes	Alkaline Slopes	1.46	14	0
Glenton sandy loam,1-6%slopes	Alkaline Slopes	179.62	14	13
Kinnear fine sandy loam,1-5%slopes	Loamy Salt desert	24.37	14	1
Potts-Begay fine sandy loams,2-7%slopes	Loamy Salt desert/Sandy Salt desert	24.87	14	1
Moyerson stony clay loam,15-65%slopes	Clayey Slopes, 50%Suitable	1376.19	12	57
Bulkley channery silty clay loam,5-30%slopes	Pinyon-Juniper woodlands	355.45	20	18
Rentsac channery loam,5-50%slopes	Pinyon Juniper woodlands	468.34	20	23
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Woodlands/Clayey Slopes, 50% Suitable	2430.21	18	68
Rentsac-Piceance complex,2-30%slopes	PJ woodland/Rolling Loam	353.24	16	22
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills, 40% suitable	938.78	18	21
Total		7083.42		315

Hatch Flat Allotment Soils/Ecological Sites

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Turley fine sandy loam,3-8%slopes	Alkaline Slopes	370.54	12	31
Rentsac-Piceance complex,2-30%slopes	PJ woodland/Rolling Loam	80.1	10	8
Rock Outcrop	None	78.48	20	4
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	11.44	12	1
Piceance fine sandy loam,5-15%slopes	Rolling Loam	7.15	8	1
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	10.71	12	1
Forelle loam, 3-8%slopes	Rolling Loam	28.19	8	3
Rock Outcrop	None	309.46	20	15
Piceance fine sandy loam,5-15%slopes	Rolling Loam	14.86	8	2
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	0.29	12	0
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills	9.37	16	0
Forelle loam, 3-8%slopes	Rolling Loam	1.95	8	0
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Woodlands/Clayey Slopes	266.84	10	27
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills	6.08	16	
Torrifluents, gullied	None	179.86	10	18

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Rock Outcrop	None	8.03	0	0
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills	3.54	18	0
Uffens loam,0-5%slopes	Alkaline Slopes	11.06	12	1
Cliffdown-Cliffdown Variant complex,5-65%slopes	Saltdesert Breaks	0.98	16	0
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills	86.72	12	7
Billings silty clay loam,0-5%slopes	Alkaline Slopes	6.71	14	0
Colorow sandy loam	Sandy Saltdesert	0.82	16	0
Water	None	1.31	0	0
Colorow sandy loam	Sandy Saltdesert	0.15	16	0
Total		1494.64		119

Upper Thirteenmile Soils/Ecological Sites

SOILUNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMS
Castner channery loam, 5-50%slopes	Pinyon-Juniper woodlands	294.15	14	21
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	0.01	12	0
Parachute Loam,25-75%slopes	Brushy Loam	69.59	8	9
Parachute-Rhone loams,5-30%slopes	Mountain Loam	210.72	4	53
Piceance fine sandy loam,5-15%slopes	Rolling Loam	2.53	6	0
Rentsac channery loam,5-50%slopes	Pinyon Juniper woodlands	80.19	18	4
Rhone loam,30-75%slopes	Brushy Loam	4.74	7	1
Shawa loam,3-8%slopes	Deep Loam	16.33	4	4
Silas loam,0-8%slopes	Mountain Swale	21.24	4	5
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills	5.18	14	0
Veatch channery loam,12-50%slopes	Loamy Slopes	9.94	8	1
Yamac Loam,2-15%slope	Rolling Loam	3.87	6	0
Total		718.49		98

Fourteenmile Allotment Soils/Ecological Sites

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Glendive Fine Sandy Loam	Foothill Swale	28	6	4
Castner channery loam, 5-50%slopes	Pinyon-Juniper woodland	1193	14	85
Piceance fine sandy loam,5-15%slopes	Rolling Loam	12	6	2
Irigul-Parachute complex,5-30%slopes	Loamy Slopes/Mountain Loam	168	8	21
Parachute Loam,25-75%loeps	Brushy Loam	211	10	21
Parachute-Rhone loams,5-30%slopes	Mountain Loam	42	5	8
Rentsac channery loam,5-50%slopes	Pinyon Juniper woodland	360	18	20
Rhone loam,30-75%slopes	Brushy Loam	146	8	18
Shawa loam,3-8%slopes	Deep Loam	40	4	10

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Silas loam,0-8%slopes	Mountain Swale	28	4	7
Torriorthents-RockOutcrop, complex,15-90%	Stoney Foothills	167	14	12
Veatch channery loam,12-50%slopes	Loamy Slopes	22	8	3
Absarokee-Delson channery loams,8-65%slop	Brushy Loam	65	8	8
Havre loam,0-4%slopes	Foothill Swale	1	6	0
Total		2481		219

Upper Thirteenmile Private Soils/Ecological Sites

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Castner channery loam, 5-50%slopes	Pinyon-Juniper woodlands	288.08	12	24
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	109.94	8	14
Parachute Loam,25-75%slopes	Brushy Loam	256.5	7	37
Parachute-Rhone loams,5-30%slopes	Mountain Loam	201.6	4	50
Rentsac channery loam,5-50%slopes	Pinyon Juniper woodlands	95.62	16	6
Rhone loam,30-75%slopes	Brushy Loam	78.68	8	9
Shawa loam,3-8%slopes	Deep Loam	66.68	4	17
Silas loam,0-8%slopes	Mountain Swale	47.94	4	12
Torriorthents-RockOutcrop, complex,15-90%slopes	Stoney Foothills	9.74	12	1
Veatch channery loam,12-50%slopes	Loamy Slopes	24.82	10	2
Yamac Loam,2-15%slope	Rolling Loam	13.2	7	2
Total		1192.8		174

Fourteenmile Allotment Private Soils/Ecological Sites

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Castner channery loam, 5-50%slopes	Pinyon-Juniper woodlands	62.83	12	5
Absarokee-Delson channery loams,8-65%slopes	Brushy Loam	152.27	8	19
Absher loam,0-3%slopes	Alkaline Slopes	3.33	14	0
Badland	None	3.34	0	0
Glendive fine sandy loam	Foothills Swale	19.71	5	4
Havre loam,0-4%slopes	Foothill Swale	11.77	5	2
Irigul-Parachute complex,5-30%slopes	Loamy Slopes/Mountain Loam	89.26	6	15
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	0.00	8	0
Parachute Loam,25-75%loeps	Brushy Loam	44.74	8	6
Parachute-Rhone loams,5-30%slopes	Mountain Loam	0.01	4	0
Rentsac channery loam,5-50%slopes	Pinyon Juniper woodlands	8.98	18	0
Rhone loam,30-75%slopes	Brushy Loam	66.15	8	8
Shawa loam,3-8%slopes	Deep Loam	69.27	5	14
Silas loam,0-8%slopes	Mountain Swale	25.86	4	6
Silas Variant loam	Mountain Swale	0.03	4	0

SOIL UNIT NAME	ECOLOGICAL SITE	ACRES	ACRES /AUM	AUMs
Torriorthents-RockOutcrop, complex, 15-90% slopes	Stoney Foothills	55.42	12	5
Veatch channery loam, 12-50% slopes	Loamy Slopes	7.30	6	1
Work Loam, 8-15% slope	Deep Loam	49.14	4	12
Total		669.41		97

Environmental Consequences of the Proposed Action: (Comparison of livestock use during the critical growth period for the combined operations) As can be seen from a comparison of livestock use during the critical growing season for the combined operations, under the current permit, livestock use during the critical growing season (defined as 4/21- 5/30 for the Hammond and Fletcher allotments), 316 AUMs are being used under the current operation. Under the proposed management plan, in Year 1 of the Grazing Schedule (p 3), growing season use will be 162 AUMs or about 51% of the current level. In Year 2 of the Grazing Schedule (p 3), growing season use will be 214 AUMs or 67% of the current level.

There will be some soil disturbance associated with construction of reservoirs, spring developments, corral construction and mechanical grubbing of salt cedar. The total estimated soil disturbance will be less than two acres. Approximately 90% of this disturbance is expected to be successfully revegetated. The negative impact of the remaining .2 acres which will remain unvegetated will be offset by the positive watershed -wide impact that results from improved distribution of grazing animals as a result of successful project construction. The proposed water developments (springs and small ponds) will further enhance grazing distribution on both the Hammond Draw and Lower Fletcher allotments and are integral to maximum effectiveness of the proposed grazing system.

Herbaceous species are generally well adapted to fire. Grasses such as needle and thread and western wheatgrass respond favorably to fire and would be expected to be herbaceous codominants in the first ten years after burning. Mat forming forbs such as Antennaria (pussytoes) and Eriogonum (buckwheat) can be severely damaged by fire if the fire occurs under hot, dry conditions such as would occur in a wildfire. In general, if the burn is completed in the spring under prescribed soil moisture conditions, it will favor forbs in the post burn herbaceous composition. Burning can be expected to lengthen the growing season and enhance the nutrient quality of forbs and grasses on the burn sites.

Environmental Consequences of Continuation of Current Management: Under this alternative, rangelands on all ecological sites would continue to improve in production, composition and cover albeit at a slower rate than would be the case for the proposed action. The improvement under the current situation is primarily the result of a light overall stocking rate which results in a lighter intensity of grazing during the critical growing period. Rangeland trend studies (Daubenmire canopy cover transects) conducted in 1998 on the Hammond and Lower Fletcher allotments showed stable or improving plant composition despite incipient drought conditions.

Environmental Consequences of the No Grazing Alternative: Under a no livestock grazing scenario, most areas being presently grazed by cattle would experience a short term

increase in both perennial plant cover and soil surface litter. The increase in perennial plant cover is most likely to occur on ecological sites classified as mid seral. On the majority of ecological sites classified as early seral there would most likely be no significant increase in perennial plant cover.

Mitigation: Revegetate disturbed areas and monitor these areas for the occurrence of noxious, problem or invasive species. Continue monitoring of current key areas to identify trends and changes in plant community cover and composition.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): With the exception of early seral ecological sites (those sites having significant composition of the invasive annual, cheatgrass), upland plant communities meet the Standard. Implementation of the proposed grazing plan will enhance our ability to meet the Standard in the future.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Fourteen Mile Creek contains a population of speckled dace, a non-game fish species abundant in Colorado's medium and small-sized West Slope streams. Speckled dace are relatively small fish reaching a maximum length of 4.5 inches. Approximately 1.0 mile of Fourteen Mile Creek occurs within this allotment. The creek runs along the southern boundary fence of Fourteen Mile Allotment with roughly 0.5 mile of the stream in areas affected by cattle grazing. A field inspection on 16 September 2004 revealed speckled dace to be abundant in both grazed and ungrazed portions of this creek. Aquatic vegetation was abundant along most of the system.

Environmental Consequences of the Proposed Action: Speckled dace were ubiquitous in areas of this stream with cattle grazing as well as areas not recently grazed by cattle. The proposed action is not expected to affect fish populations in Fourteen Mile Creek.

Environmental Consequences of Continuation of Current Management: Current management has had no apparent ill effect upon aquatic wildlife within Fourteen Mile Creek.

Environmental Consequences of the No Grazing Alternative: The no grazing alternative would likely create conditions that would favor even higher populations of speckled dace due to improved riparian vegetation along the banks of Fourteen Mile Creek.

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): This land health standard is currently being met and will continue to be met under the proposed action.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: Hatch Flat, Hammond Draw and Lower Fletcher Draw: These adjacent allotments consist of approximately 18,300 acres of public land. The allotments' larger valleys consist of greasewood and basin big sagebrush. Uplands consist of rimrock and xeric Wyoming big sagebrush parks interspersed among juniper-dominated woodlands. The bulk of these allotments are used by deer and elk during the winter season (September through May) with those lower-elevation portions of Hammond and Fletcher (within two miles of the White River) used more intensively during the late winter and early spring months. Extensive portions of these allotments were burned by wildfire in the past five years.

Upper Thirteenmile and Fourteenmile: These adjacent allotments include approximately 3,100 acres of public land. Upland portions of this allotment include Wyoming big sagebrush, pinyon-juniper, Gambel oak, serviceberry and rabbitbrush. Steep draws are occupied by pockets of Douglas-fir. Valleys are typically dominated by basin big sagebrush, with the bottomland area along Fourteen Mile Creek supporting a narrow riparian community composed of sedges, bulrushes and young willows. These allotments straddle the boundary of ranges delineated as big game winter and summer ranges and are primarily occupied by deer and elk from the late spring through early winter months.

Information on these allotments' widely varied small mammal populations is scanty; however, the 20 or so species potentially occurring on these allotments are widely distributed throughout Colorado and the Great Basin or Rocky Mountain regions. Even though several species have relatively specialized habitat affiliations (i.e., riparian associates such as western jumping mouse, long-tailed vole in Upper Thirteenmile and Fourteenmile allotments), all species display broad ecological tolerance and are documented from habitats ranging from foothill to alpine sites. No narrowly distributed or highly specialized species or sub-specific populations are known to occur in these allotments.

Environmental Consequences of the Proposed Action: Hatch Gulch: The proposed action would reduce livestock use intensity during the early spring months by 37%. Removal of livestock by the end of April would eliminate May use—a 1- month reduction in the duration of use.

Hammond/Fletcher: Although the proposed action would extend early spring use to Hammond Draw (March to mid-April) and the season of use would essentially be the same as current, overall growing season use (through mid-May) would be reduced on these two allotments by 32-49%, with growing season use in individual allotments reduced by 50-60% in alternate years. Winter use in Fletcher would also be reduced by 10-16%.

A common management feature on each of these allotments is proposed substantive reduction in the intensity or duration of spring livestock use. These efforts would reduce direct competition for spring forages among livestock and big game and, in the longer term, enhance herbaceous forage conditions (e.g., variety, quality, and quantity of desirable herbs), particularly for deer in the spring. Improved herbaceous forage availability would also help abbreviate deer reliance on woody forage into the spring months and help relieve the effects of heavy browsing use on sagebrush (i.e., increased vigor and production for subsequent winters use). In the context of

winter forage production and availability, redeveloping juniper woodlands targeted for treatment are in a declining state. Proposed burning would result in short term and relatively minor reductions in predominantly sagebrush forage for late winter deer use (<300 acres), but would ultimately contribute to increasing quantities and quality of woody forage for winter use functions.

13-mile/14-mile: The 13-mile allotment would be subject to the same period of livestock use (June through mid-October), but at half the current intensity. The proposed action in the 14-mile allotment features minor increases (22%) in overall cattle use summer through early fall, but strong corresponding reductions in later fall and winter use (47%) and removal of all growing season livestock use from the 14-mile valley.

Similar to the discussion for the group of downriver allotments, strong reductions in summer and fall livestock use would increase the availability of herbaceous forage for seasonal big game use, including the late fall and early winter period for elk.

In both sets of allotments, reduced intensity or duration of use during the growing or dormant season would increase the quantity of residual ground cover and forage/cover resources attributable to herbaceous understories (e.g., herbage, seed) to the benefit of resident small mammal populations. Removal of cattle from the 14-mile valley during the growing season and a nearly 50% reduction in dormant season use would likely allow for an accumulation of residual ground cover material that is preferred by small mammals with riparian affiliation and those requiring well-developed ground cover, such as: long-tailed and montane vole and western jumping mouse.

Environmental Consequences of Continuation of Current Management: Slow community improvements (e.g., ground cover, native species composition) associated with the continuation of current grazing practices would have limited influence on the abundance or availability of herbaceous forage and/or cover for big game and small mammal populations over the course of this permit.

Environmental Consequences of the No Grazing Alternative: Similar to the proposed action, removal of cattle would be expected to increase herbaceous ground cover on 6500 acres of mid- to late-seral shrublands and recently burned habitats across all allotments as a source of cover and forage for seasonal big game and resident small mammal populations. However, grazing by horses and elk would persist in substantially reducing herbaceous ground cover expression in the Fletcher and Hammond allotments (5800 acres), particularly during the dormant season. Relative to the proposed action, dramatic increases in ground cover expression would likely occur on 700 acres of mid and late seral shrublands, or 3% of these allotments' extent. This alternative would continue to have little influence on understory conditions on those 4,200 acres of early-seral bottomland and lower elevation sagebrush/saltbush stands where annual weeds exert strong competitive influences (about 46% of shrubland types associated with permit renewal) and in pinyon-juniper and Douglas-fir woodlands (nearly 60% of permit area).

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): From the broader landscape perspective, the land health standard for terrestrial wildlife is currently being met, although approximately 4200 acres on the Fletcher/Hammond/Hatch allotment group would persist in failing the standard because of entrenched annual weed infestations. The current management alternative, although demonstrating slow community-level improvements, would tend to maintain the status-quo through the permit period. The proposed and no-action alternatives would accelerate positive gains in land health criteria (i.e., understory development and expression as forage and cover to all resident wildlife) and more consistently and fully serve the intent of the land health standard for animal communities.

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access		X	
Cadastral Survey	X		
Fire Management			X
Forest Management			X
Geology and Minerals		X	
Hydrology/Water Rights			X
Law Enforcement		X	
Paleontology	X		
Rangeland Management			X
Realty Authorizations	X		
Recreation	X		
Socio-Economics		X	
Transportation		X	
Visual Resources		X	
Wild Horses	X		

FIRE MANAGEMENT

Affected Environment: The Lower Fletcher Draw Allotment prescribed burning units fall within the C-10 Fletcher fire management polygon. “C” polygons are areas where fire is desired but there may be social, political, or ecological constraints that must be considered. The Fletcher fire management polygon/Lower Fletcher Draw Allotment has experienced 43 wildland fire starts since 1994, consuming 4,622 acres. This area has proven to be a fire prone area with high potential for large wildland fire events.

The 632 acres of chaining on the west side of Fletcher Draw presents an abnormal fuel loading (approximately 7-8 tons/acre vs. an unchained juniper site totaling approximately 5 tons/acre) which presents a significant wildland fire hazard. Due to the unnatural fuel loading on the ground intense soil heating resulting soil sterilization and hydrophobic conditions can be

expected. The heavy regrowth of juniper ranging in 3-10 feet in height present the opportunity for a rapid rate of spread and difficult to control wildland fire event that could cause significant ecosystem degradation and failure of the post fire vegetation community to meet land health standards.

Environmental Consequences of the Proposed Action: The proposed reservoirs, corals, eradication of salt cedar and supplemental feeding will have no impact on fire management.

Prescribed burning of the chainings in Fletcher Draw presents the opportunity to significantly reduce the unnatural fuel loading that resulted from the chaining. Conducting the prescribed burn under moderate environmental conditions would limit the negative impacts to the soils and established perennial grasses and forbs. Prescribed burning would be significantly cheaper than the suppression costs incurred attempting to suppress a wildland fire burning under extreme environmental conditions.

Implementing the prescribed burn in Fletcher draw would greatly reduce the threat of large difficult to control wildland fire potential and achieve fire management goals of utilizing fire to promote a vegetation mosaic representing natural distributions of plant communities of varying successional stages.

Upon completion of the prescribed burn seeding of the area should be a high priority with native/locally adapted species to preempt cheatgrass invasion. This would be essential to the success of the project from a fire management standpoint. Should cheatgrass become the dominant vegetation present, post burning, a high wildland fire potential would remain due to the frequent unnatural fire return interval created by cheatgrass.

Environmental Consequences of Continuation of Current Management: The threat of large difficult to control wildland fire would remain due to unnatural fuel loadings. The potential for degraded ecosystem processes and rangeland health would remain in the event of a wildland fire burning under extreme environmental conditions.

Environmental Consequences of the No Grazing Alternative: See Environmental Consequences of Continuation of Current Management.

Mitigation: Upon completion of any prescribed burning seed with native/locally adapted species to preempt cheatgrass invasion. To assure success of burn/seeding livestock should be prevented from utilizing the burned areas for a minimum of two years.

FOREST MANAGEMENT

Affected Environment: All of the allotments contain pinyon/juniper woodlands. Pinyon/juniper woodlands within the resource area have been classified as to commercial or non-commercial based on their productivity and composition of pinyon. On commercial woodlands pinyon makes up greater than 60% of the volume. These commercial woodlands are found on higher elevations (6,000 to 7,000 feet) on gentle slopes (gentle slopes relating to harvestability). During the classification for the current Resource Management Plan, no commercial stands were

identified because of suitability for harvest. These woodlands are used by the local community for harvest of firewood and fence posts.

Above 7,000 feet on North aspects are found scattered stands of inland Douglas-fir. Because of the steep slopes none of the stands within the project area are considered harvestable, either economically or ecologically.

The chart below shows the forest and woodland resources within the project area.

Allotment	Acres P/J Woodland	P/J % contribution to allotment	Douglas-fir Forests	Douglas-fir % contribution to allotment
Lower Fletcher	4,200	42%	0	0
Hatch Flat	347	14%	0	0
Hammond Draw	2,402	34%	0	0
Upper Thirteen Mile	374	52%	211	29
14 Mile	1,556	63%	42	2

Lower Fletcher allotment has 632 acres of low elevation pinyon/juniper woodland that was chained in the 1960s. The preferred alternative proposes to prescribe burn approximately 300 acres of these woodlands to clean up residues and to maintain a low-seral community. Also approximately 700 acres of woodland have been burned by wildfire and then seeded to stabilize soils.

Hammond Draw has approximately 800 acres of P/J woodland that was burned in 1996 and was seeded to stabilize the soils.

Environmental Consequences of the Proposed Action: Under the proposed action approximately 300 acres of P/J chaining would be retreated to maintain a low seral plant community for the purpose of forage production and to decrease the opportunity for large scale stand replacing fires. On a resource or local scale this proposal does not affect the woodland base, and acts to modify, positively, the age structure diversity of woodlands within the allotment. The wild fires that occurred in the 1990s also benefited the age structure diversity of the Hammond Draw and Lower Fletcher allotments. The proposed grazing program will not affect the woodlands or forest stands within the project area.

Environmental Consequences of Continuation of Current Management: Under this alternative the P/J chaining prescribed burn would not take place. Debris remaining from the chaining operation would remain and woodland stands would develop without alteration. The age of the trees in the chaining area and the debris provide understory and ladder fuels that increase the opportunity for a large scale stand replacing fire on the order of 600 acres. The current grazing program has not and is not expected to affect the woodlands or forest stands within the project area.

Environmental Consequences of the No Grazing Alternative: Forest and woodland types found in the project are not affected directly by grazing, and removing grazing would not change the development of woodland or forest types. Not doing the prescribed burning of the chainings in Lower Fletcher would have the same impacts as *Current Management*.

Mitigation: None

HYDROLOGY AND WATER RIGHTS

Affected Environment: Listed in the tables below are, springs that have been identified in the White River Water Atlas as being within these allotments. These springs were inventoried in 1983 and 1984. The seasonal springs do not have water rights nor have they had any water quality analysis done on them. The other springs have acceptable water quality values except for spring 119-16 which has a specific conductance of 6,617 micromhos.

Perennial Springs

Spring Name	Quarter	Sec#	Twp	Range	Water right	SC	pH	Discharge in gpm	Date Measured
119-13	SWNE	9	2N	100W	85CW461	2402	7.8	0.61	6/30/1983
119-15	NWSE	9	2N	100W	85CW461	2201	7.5	0.16	6/30/1983
119-16	SWSE	9	2N	100W	85CW461	6617	7.1		6/30/1983

Seasonal Springs

Spring Name	Quarter	Sec#	Twp	Range	SC	pH	Discharge in gpm	Date Measured
119-44	NWNW	15	2N	100W	3945	7		6/30/1983
148-01	NENE	28	2N	100W	4472		0.13	9/13/1983
170-17	NWNE	35	2S	95W	--	--	--	9/12/1984
170-37	SWNW	1	3S	95W	--	--	--	9/12/1984
170-38	NWSE	1	3S	95W	--	--	--	9/12/1984

The proposed spring developments were not inventoried during 83-84 and as a result do not have a current water right holding on them. Since this inventory was extensive it is probable at the time of the inventory, these springs were either seasonal or marginal at best and were considered to be springs not worth developing.

In the unlikely event that the prescribe fire should reach these areas, it would be of low intensity and any riparian vegetation would resprout/regrow quickly after being burned.

Environmental Consequences of the Proposed Action: Allowing rest by pasture rotation would be helpful in maintaining the obligate vegetation types that are necessary to anchor streambanks and reduce sediment production.

Typically seasonal springs are not developed and appear as small riparian areas in ephemeral drainage (refer to the riparian/wetland section above). If the springs happen to be seasonal, the State would not grant a water right on these developments leaving development unprotected for other uses.

Environmental Consequences of Continuation of Current Management: The most obvious impacts to springs would be trampling of the riparian vegetation around the water source. Continuous season long grazing would not allow any improvement in riparian vegetation associated with unprotected springs.

Environmental Consequences of the No Grazing Alternative: No grazing is likely to improve riparian vegetation associated with springs utilized by livestock. Maintenance of developed springs, presently required of the permittee, would likely lapse with a loss of public investment in these improvements. The springs that have decreed water rights were granted to BLM based upon the following beneficial uses; livestock, wildlife and support of riparian vegetation. Without livestock use, which is a major portion of the decreed water the BLM could lose the right to the water and cause it to become abandoned under state law. Abandonment would leave these waters available to another use (user), which could remove the water from the site impacting the riparian vegetation, as well as, wildlife species, dependent upon that vegetation or water.

Mitigation: See mitigation recommended in the Riparian, Wetland section above.

RANGELAND MANAGEMENT (*SEE VEGETATION*)

CUMULATIVE IMPACTS SUMMARY: This permit renewal will have a positive cumulative impact on the affected rangelands because, with tenure, the permittee will have an incentive to provide an increased level of stewardship on the allotments addressed in this document.

By implementing the proposed projects (e.g. reservoir and spring development, salt cedar eradication, and the prescribe fire), BLM will achieve alternative water sources, and a mosaic landscape with varying seral vegetation classes which result in a more fire resistant landscape and healthier rangelands.

PERSONS / AGENCIES CONSULTED: A Public Notice of the NEPA action is posted on the White River Field Office Internet website at the Colorado BLM Home Page asking for public input on lease renewals and the assessment of public land health standards within the White River Field Office area. Local notification is published in the Rio Blanco Herald Times newspaper located here in Meeker, Colorado on a monthly basis. Individual letters are sent to the lessees/permittees informing them that their lease is up for renewal and request any information they want included in or taken into consideration during the renewal process.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Caroline Hollowed	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Gabrielle Elliott	Archaeologist	Cultural Resources Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species
Marty O'Mara	Petroleum Engineer	Wastes, Hazardous or Solid
Glenn Klingler/Ed Hollowed	Wildlife Biologist	Wetlands and Riparian Zones
Caroline Hollowed	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Glenn Klingler	Wildlife Biologist	Aquatic Wildlife
Ed Hollowed	Wildlife Biologist	Terrestrial Wildlife
Chris Ham	Outdoor Recreation Planner	Wilderness
Mark Hafkenschiel/Caroline Hollowed	Rangeland Management Specialist/ Hydrologist	Soils
Mark Hafkenschiel	Rangeland Management Specialist	Vegetation
Chris Ham	Outdoor Recreation Planner	Access
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Mark Hafkenschiel	Rangeland Management Specialist	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Chris Ham	Outdoor Recreation Planner	Transportation
Chris Ham	Outdoor Recreation Planner	Visual Resources
Valerie Dobrich	Natural Resource Specialist	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2004-115-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to implement the proposed action to renew grazing permits #051402 and #051414 for a period of ten years and to approve the allotment management plan for the five grazing allotments covered by the grazing permits as described in the proposed action with the addition of the below mitigation.

The allotment management plan and grazing system would provide a period of rest from livestock use during the critical growing period, thereby enhancing improvement of the affected rangelands. In addition, in order to enhance riparian conditions on Fourteenmile Creek, this part of the Fourteenmile allotment (# 06013) will be used by cattle only in the fall and winter. I have also adjusted the livestock grazing preference for the Upper Thirteenmile (06012), Fourteenmile (06013) and Hatch Flat (06336) allotments so it more accurately reflects the long term average forage production on the range sites of those lands. The grazing rest periods are consistent with the minimum rest periods developed in the White River ROD/RMP and are also consistent with the Livestock Grazing Management Guidelines developed for the Colorado Public Land Standards for Rangeland Health. Adjustments will be made in the grazing plan to insure that land use plan resource objectives are met or exceeded. The proposed action offers the best option for attaining Public Land Health Standards and achieving the vegetation management objectives presented in the White River ROD/RMP.

The range improvements proposed are necessary to properly implement the grazing system and will have a net positive impact on the environment in the long term with the exception of development of West Hammond Spring #1. It is my decision to not authorize the development of the proposed West Hammond Spring #1 because of the undue resource damage that would occur to a nearby riparian area, thus preventing continued meeting of Public Land Health Standard #2.

MITIGATION MEASURES:

1. Three known Rock shelters will be fenced.
2. The renewed permit will contain avoidance requirements for all recorded sites.

3. The permittee will be required to report any new cultural deposit discoveries.
4. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
 - whether the materials appear eligible for the National Register of Historic Places
 - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
 - a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

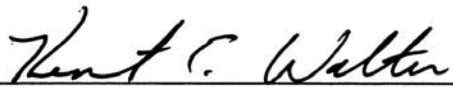
5. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
6. For *Bromus tectorum*, Compliance with Standards for Rangeland Health through managed grazing, aggressive rehabilitation including aerial and drill seeding with adapted species immediately following wildfire events, and aggressive revegetation of all earthen disturbances.
7. To limit the spread and establishment of noxious and invasive species, all earthen disturbances will be revegetated with adapted grass species. For *Tamarix* spp.: See the treatment plan, Pesticide Use Proposal as part of the Proposed Action.
8. Vegetation clearing during cross-country transport of construction equipment to remote reservoir or spring sites should be strictly avoided. Any discernible tracks or trails generated by equipment transport should be conditioned by the permittee to deter any subsequent vehicle use (e.g., woody material pulled onto track).
9. Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*.

10. It is recommended that the proposed West Hammond Spring #1 not be developed.
11. Heavy equipment should not be used to grub out tamarisk in channel or floodplain areas that support well-developed swale or riparian growth (e.g., saltgrass).
12. Continue monitoring of the current key areas and add additional Daubenmire canopy coverage transects to identify trends and changes in plant community cover and composition.
13. Revegetate disturbed areas and monitor these areas for the occurrence of noxious, problem or invasive species. Continue monitoring of current key areas to identify trends and changes in plant community cover and composition.
14. Upon completion of any prescribed burning seed with native/locally adapted species to preempt cheatgrass invasion. To assure success of burn/seeding livestock should be prevented from utilizing the burned areas for a minimum of two years.
15. Before permitting the development of the springs, an inventory would need to be done to determine if they in fact are perennial and a water right could be filed on them.

COMPLIANCE/MONITORING: Compliance with the renewed grazing permits and their associated projects will be accomplished through the White River Field Office Range Management Program. Monitoring will be done by the range staff using Colorado Public Land Standards for Rangeland Health, for Lower Fletcher, Hammond Draw rangeland monitoring studies.

NAME OF PREPARER: Mark Hafkenschiel 11/9/04

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed 5/17/05

SIGNATURE OF AUTHORIZED OFFICIAL: 
Field Manager

DATE SIGNED: 5/18/05

ATTACHMENTS: Pesticide Use Permit
Figure 1: Location map of Proposed Projects (Reservoirs, Springs Corral)
Figure 2: Location map of Prescribed Burning
Figure 3: Location map of Proposed Salt Cedar Eradication sites
Location map of the Proposed Action

BLM PESTICIDE USE PROPOSAL

PROPOSAL NUMBER 00-CO-110-0005

REFERENCE NUMBER Co-SaltcedarCOX-0005

FIELD OFFICE White River COUNTY Rio Blanco DATE Jan 14, 2004

LOCATION: Rio Blanco County, Colorado , Hammond, Lower Fletcher, and Hatch Flat allotments, T2N R100W Sec 15, SWNW; Sec 21 NWNW; Sec 22 NENE; Sec 23 NWNW; Sec 27 SESW; Sec 26 SWNW; T2N R101W Sec 13 SENE

DURATION OF PROPOSAL: 3 years, 2005, 2006, 2007

I. PESTICIDE APPLICATION (including mixtures and surfactants):

TRADE NAME(s): Arsenal

COMMON NAME(s): Imazapyr

EPA REGISTRATION NUMBER(s): 241-346

MANUFACTURER(s): BASF (Formerly American Cyanamid)

FORMULATION: Liquid, \ XX \ Granular \ \

METHOD OF APPLICATION: Ground, (Truck, ATV or Backpack)

MAXIMUM RATE OF APPLICATION

USE UNIT ON LABEL: 2 quarts per acre (1 Lb. A.I./Acre) or 1% Solution

POUNDS ACTIVE INGREDIENT/ACRE: 1 lb.A.I./Acre (block treatment)
1% solution for individual plant treatment

INTENDED RATE OF APPLICATION: 1 lb.a.i./acre or 1% solution

APPLICATION DATE(S): late-June until start of change of leaf color in fall.

NUMBER OF APPLICATIONS: one per year

II. PEST (List specific pest(s) and reason(s) for application):

Salt cedar (Tamarix species) High water user and crowds out other vegetation along waterways, ponds, reservoirs, and riparian areas.

III. MAJOR DESIRED PLANT SPECIES PRESENT:

Western and streambank wheatgrass, saltgrass, coyote willow, cottonwood and greasewood

IV. TREATMENT SITE: (Describe land type or use, size, stage of growth of target species, slope and soil type).

Scattered individual plants and in some case small blocks of salt cedar along waterways, at high water line of ponds and reservoirs & riparian areas.

ESTIMATED ACRES 2 acres

V. SENSITIVE ASPECTS AND PRECAUTIONS: (Describe sensitive areas [e.g., marsh, endangered, threatened, candidate and sensitive species habitat] and distance to treatment site. List measures taken to avoid impact to sensitive areas).

None However if any sensitive plants are located in the area extra precautions will be made to ensure the prevention of loss or damage to these plants. Label guidelines will be followed or extra precautions will be made to protect the sensitive areas. Alternated treatment methods will be used if a sensitive area is present.

VI. NON TARGET VEGETATION: (Describe the impacts, cumulative impacts, and mitigations to non target vegetation that will be lost as a result of this chemical application).

There is a much greater risk of loss of non-target vegetation in this area from the increased infestation of salt cedar than the risk of non-target vegetation loss due to chemical application. At the present time less than .1% of the area is infested with salt cedar. Therefore, a minimal amount of area will be chemically treated. However this invasive plant will continue to spread, utilize the majority of the water sources and crowd out the non-target vegetation. At the present time most of this area can be treated by individual plant treatment or small blocks of less than one tenth acre, thus minimizing impacts to non-target plant species.

VII. INTEGRATED PEST MANAGEMENT: (Describe how this chemical application fits into your overall integrated pest management program for the treatment area.

Initially these areas will be inventoried and mapped. The Hammond/Fletcher allotment treatment sites will be a Demonstration Site Area to show people in Colorado and surrounding states how early detection and control can minimize possible large scale impacts to non-target areas. In addition, this project will be part of a larger, cooperative effort among all the landowners, county and agency personnel in this area

Originator's Signature: Mark Hafkenschiel

Date: 1/14/04 Telephone Number: 970-878-3837

Originator's Company Name: USDI-BLM, White River Field Office

Certified Pesticide Applicator's Signature: Mark Hafkenschiel

BLM Weed/Pesticide Coordinator's Signature: _____

BLM Manager's Approval: _____ Date: _____

Acting DSD, Lands and Renewable Resources Date: _____

CONCUR OR APPROVED
NOT CONCUR OR DISAPPROVED
CONCUR OR APPROVED WITH MODIFICATIONS

Figure 1: Location of Range Improvements

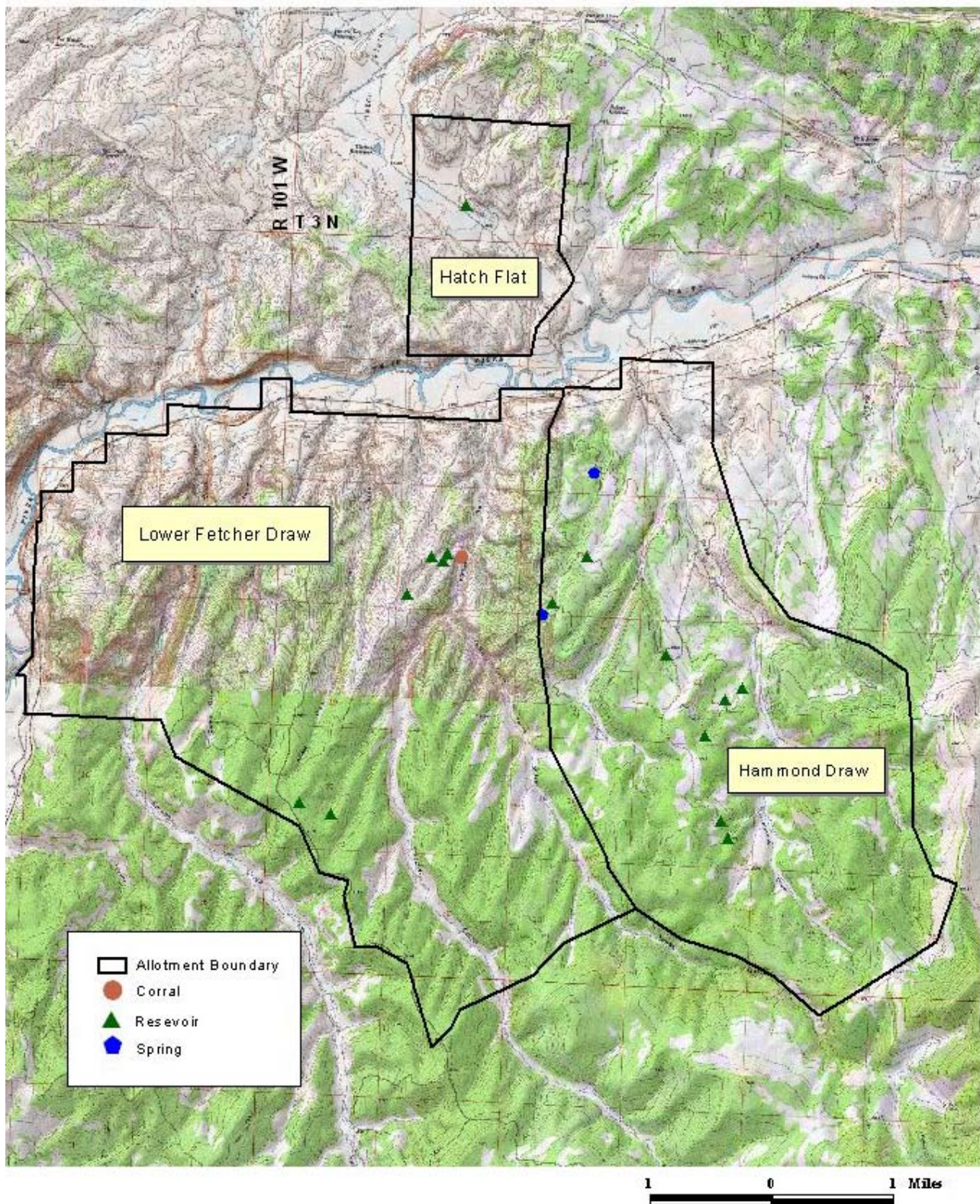


Figure 2: Proposed Fletcher Chaining Burn

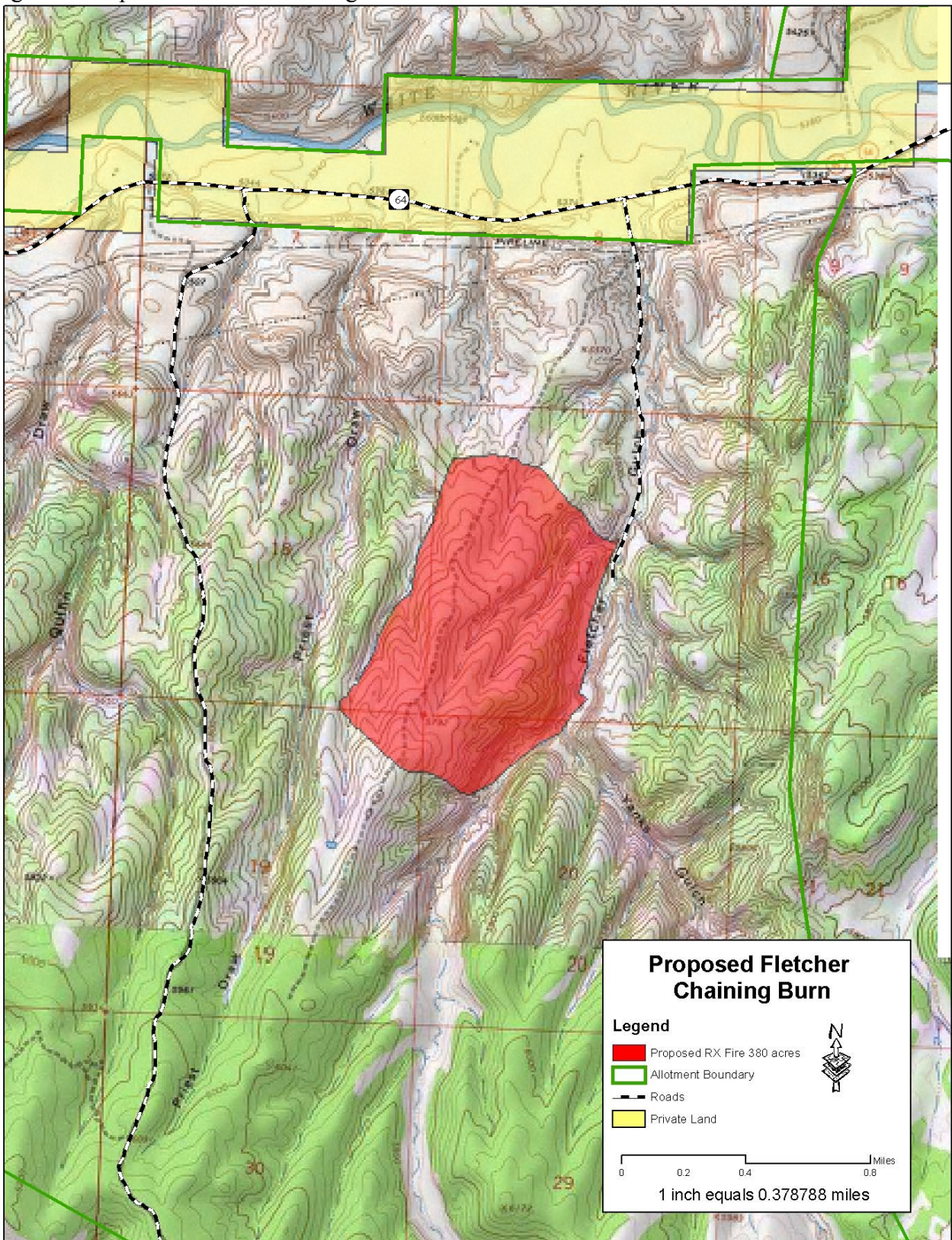
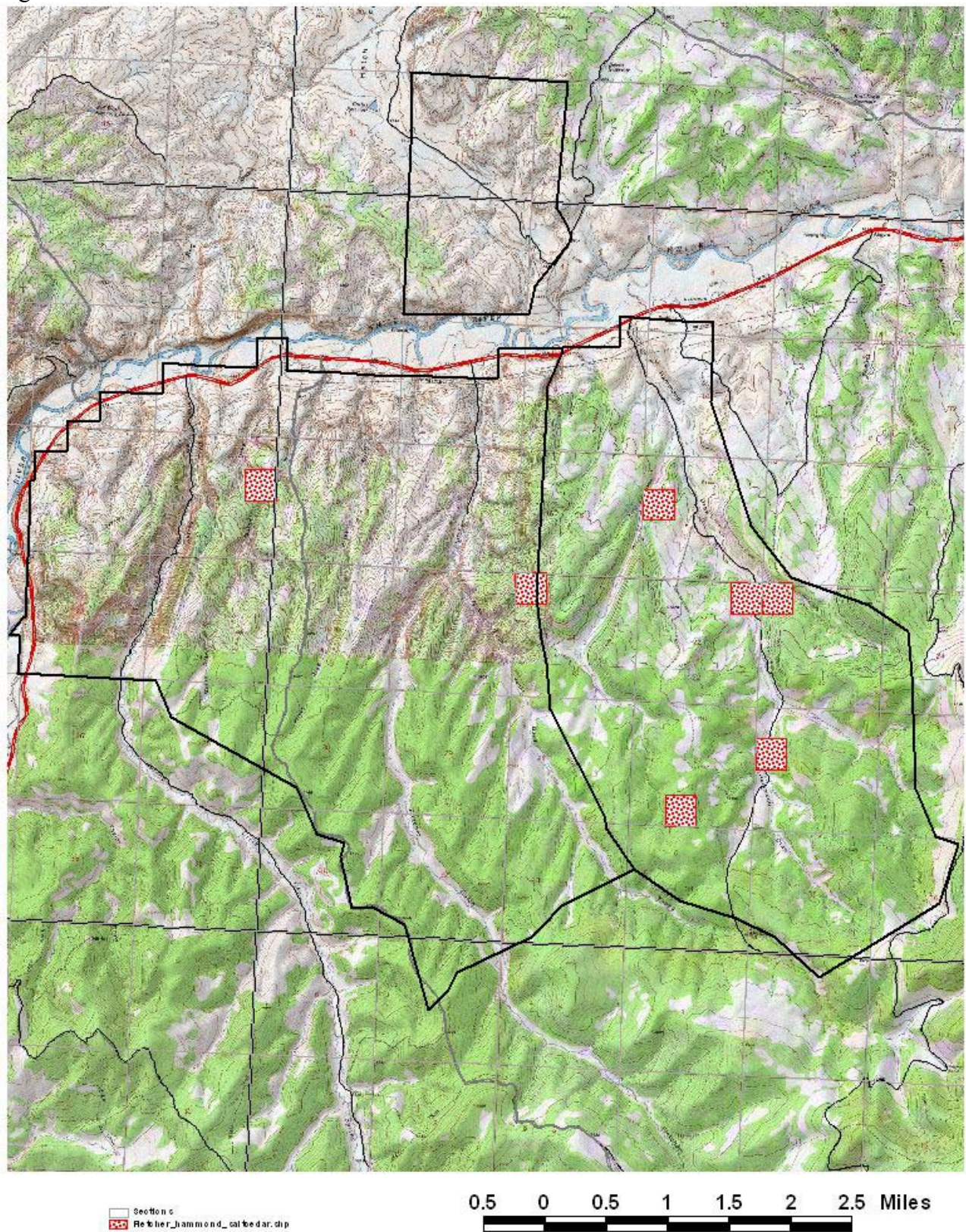


Figure 3: Salt Cedar Eradication Locations



Location of Proposed Action CO-110-2004-115-EA

